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Communicating Emotional Experiences via a Shareable Interface

Background

Emotions are perceived as critical to effective participation in instructional interactions [1]. Teachers are often presumed to have the ability to both sense the emotional states of the learners in the classroom [2] and adjust their lesson plans ad hoc to support or scaffold the emotions of their students. Yet recent research suggests that this may not be the case [3].

This research project has explored how technologies might be used to support emotional communication between student and teacher to enable a teacher to have a greater understanding of their students' emotional experiences.

The Subtle Stone

The Subtle Stone is a shareable interface, but perhaps unconventionally so. Rather than using the device to allow users to collaborate over a given task which (hopefully) contributes to their own knowledge and understanding, the Subtle Stone allows students to jointly contribute to the knowledge of the class teacher with respects to the emotional experiences of his or her students.

The Subtle Stone is a handheld squeezable device which emits seven differently coloured lights. To change the colour of the Subtle Stone the user simply squeezes it until it displays the desired colour. As such the Subtle Stone can be used to send a private message to a teacher, head of year, or support worker about the student's own interpretation of their emotional experiences.

To engender privacy each student develops their own colour:emotion language whereby they define which colour represents a particular emotion. When a student wishes to share a particular emotional experience with their teacher they squeeze their Subtle Stone until it displays the colour representing that particular emotion. Once a student has selected a colour on their Subtle Stone, this choice is transmitted to the teacher's display device.

Questions Arising from the Application of a Shareable Interface

One of the main questions which has arisen out of my work with the Subtle Stone in the classroom is that of representation.

It is my belief that the question of how we represent data (either to teachers or users) arising from the use of a Shareable Interface is not distinct to the Subtle Stone. The current challenge for the Subtle Stone technology lies with

understanding how the information collected via the students' usage of the Subtle Stones can be represented to teachers in a way which is usable and useful for the teacher.

The challenge for other Shareable Interfaces may come from representing the current state of the task back to the user. Whilst progress within some collaborative tasks is explicit in the task itself (the completing of a puzzle), progress in other tasks is not always easy to visualise (for example reflecting on a scientific concept).

Or alternatively the challenge may arise from wanting to represent the group's processes back to the users. Children in particular are not always good collaborators, so how could a group's use of the Shareable Interface be presented back to the users in order to provide a sense of how well the group are collaborating?

References

1. Meyer, D., Turner, J, *Re-conceptualizing emotion and motivation to learn in classroom contexts*. Educational Psychology Review 2006. **18**: p. 377-390.
2. Goleman, D., *Emotional intelligence: why it matters more than IQ*. 1996, London: Bloomsbury.
3. Alsmeyer, M., Luckin, R., Good, J. *Looking out over a sea of blank faces: interpreting the emotional experiences of learners in formal educational settings*. in *Workshop in Modelling and Scaffolding Affective Experiences to Impact Learning held as part of AIED*. 2007. LA.