

Interactive Event: Encouraging Classrooms that Care

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The theme of this conference, “building learning systems that care” reflects the current drive of researchers within the AIED arena to create intelligent tutors and systems that take account of the multi-faceted learner. One dimension that has in recent years received increasing attention in this field is the emotional and more broadly the affective experiences of learners. In particular work has focused on how these experiences might be recognised by a system and following from this what the educational system might do in response to these perceived experiences.

Our work explores how emotional experiences might be further supported within classroom-based learning interactions to encourage classrooms that care. At first glance technology of this kind may seem redundant given that in particular teachers are emotionally intelligent and therefore considered to be quite capable of understanding the emotional needs of their learners. However, recent research suggests that it can be quite a challenge, even for highly experienced teachers, to understand and know how to respond to the emotional experiences of students. This is particularly the case when dealing with a full class of students who are potentially experiencing a wide variety of emotions.

The question of how technology might support emotions and affect within the classroom environment has to date been largely unexplored. The two tools we present in this interactive event aim to address this gap in research. Both tools can be used as a means of supporting students and teachers in their effort to create caring classrooms, focusing on the recognition and communication of emotional and affective states.

First we will present the Subtle Stone, a tangible tool that allows students to privately communicate their emotional experiences to their teacher throughout lessons. The Subtle Stone is a squeezable colour-orb that changes colour with each squeeze. Using her own colour:emotion language a student can communicate that she is experiencing a particular emotion to her teacher by selecting the colour on her Subtle Stone that correlates with that emotion. The teacher is alerted of her students’ emotional experiences through a separate tablet-based interface.

Our second exhibit will be “Chameleon Clothing” which is a set of wearable garments and accessories. These garments use built-in soft sensors and electronics to communicate an understanding of that wearer’s current level of confidence. An abstract representation of the wearer’s level of confidence is publically displayed through changing ambient representations.

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