MADE-Dashboard: Visual Analytics for Multimodal Affective Educational Software
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Challenge: How can theoretical models of Human-Computer Interaction (HCI) inform affective multimodal education.

Approach: Need for software to support teachers in monitoring students to provide and engage students in learning with different affective strategies.

Why MADE:
MADE Framework (Multimodal Affect for Design and Evaluation) [1]
- Design Process: Goal-Directed Design (Affective Personas) and Usage-Centered Design (Affective Essential Use Case)
- Inspection Techniques: MADE Walkthrough and MADE Heuristics

Why MADE-Dashboard:
Real classroom teachers monitor their students’ emotional reactions while learning, but this is difficult with educational software used online: the MADE Teacher’s Dashboard addresses this gap.

Emotion Detection:
Clmtrackr: Open source software that uses computer vision that recognizes emotional state [3].

Underlying theory:
The affective model of education from Kort et al. [2] includes four phases of emotion desirable in learning:

Functional Prototype:

Contributions and Next Steps:
- First use of web-based emotion tracking for education software
- User studies needed
- Studies of reliability needed

References: