An Emotional Feedback Based on Facial Action Coding System for MOOCs with Computer-Based Assessment

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Abstract:
The emotion detection and recognition philosophy aims at facilitating human adaptation and social integration. Teaching process based on this philosophy implies observing the behavior of the learner in order to detect affective responses that can influence the learning quality. Similarly, emotional feedback can regulate the learners' emotional states in the e-learning environments integrating Massive Open Online Courses (MOOCs) as open access online courses. However, the emotion inclusion in such environments is still absent, nor during the learning activity or during the assessment process. In this paper, we propose a new emotional feedback based on facial action coding system for MOOCs, which aims to make the learners aware of their emotional states via the analysis of their facial expressions using the facial action coding system during the courses as well as integrate computer based assessment for evaluating learners' emotional states, thus improving their motivation, engagement, self-regulation and learning achievement. A prototype was developed to demonstrate the importance of such solution.