

Eye Tracking: Biometric Evaluations of Instructional Materials for Improved Learning

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Abstract : Eye tracking is a great way to triangulate multiple data sources for deeper, more complete knowledge of how instructional materials are really being used and emotional connections made. Using sensor based biometrics provides a detailed local analysis in real time expanding our ability to collect science based data for a more comprehensive level of understanding, not previously possible, for teaching and learning. The knowledge gained will be used to make future improvements to instructional materials, tools, and interactions. The literature has been examined and a preliminary pilot test was implemented to develop a methodology for research in Instructional Design and Technology. Eye tracking now offers the addition of objective metrics obtained from eye tracking and other biometric data collection with analysis for a fresh perspective.

Keywords : area of interest, eye tracking, biometrics, fixation, fixation count, fixation sequence, fixation time, gaze points, heat map, saccades, time to first fixation

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