

EXPLORING HIGH SCHOOL STUDENTS' EMOTIONS IN ENERGY ILLUSTRATIONS BY USING EDA SENSORS

Eman Sharaf^a and Martin Hopf^a

Presenting Author: Eman Sharaf (eman.sharaf@univie.ac.at)

^aUniversity of Vienna, Center for Teacher Education, Austrian Educational Competence Centre Physics, Porzellangasse 4, 1090 Vienna, Austria

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ABSTRACT

Academic emotions are a multidimensional phenomenon (Pekrun et al., 2004; Shuman, V., & Scherer, K. R. 2014) involving different processes. However, the students' cognition and outcomes are related directly to students' academic emotions, the electrodermal Activity (EDA) is one of the electrical parameters that can be used to determine the emotional state including stress levels. In this presentation, we explore high school students' emotions in physics by using those sensors. First, data from two different versions of EDA sensors are compared with self-reported emotions by using a computerized version of Self-Assessment Manikin (SAM) (Bradley & Lang, 1994). In this step we compared our data to the data of the technical handbook (Lang et al., 2008). Second, we profile students' emotions of energy images with EDA sensor data and self-reported data. The data from both EDA sensor systems are comparable. But no connection between EDA sensor data and self-reported data can be found. We also can differentiate different clusters of energy pictures according to students EDA levels.

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