New Digital Technology to Analyze Students' Emotions: How Far Is Too Far?

Some teachers struggle to keep students' attention on a daily basis, while others easily reach them with any subject matter. Many variables affect attention—including emotion. How we feel when we learn something matters. Thus, the future of learning may involve adjusting teaching methodology based on student emotions. If that's so, what are the implications for future students?

Pave the Path to Emotional Intelligence

Big data holds the key to identifying consumer, employee, and student emotions. Already, companies like Procter & Gamble and Coca-Cola use emotional recognition software and consumer monitoring to read between the lines.

Current technological solutions can differentiate between minute facial responses,including the difference between a sarcastic smirk and a genuine smile (definitely helpful, especially when teenagers are in the picture!). Using that information, organizations can better determine if a product or concept really resonates with an audience. Emotional intelligence companies, including Affectiva Inc. and Emotient Inc. (now owned by Apple), are helping consumer product companies, physicians, and educators understand if micro expressions match or contrast with what we say and how we act.

Bring Technology into the Classroom

What people learn can affect an emotional state, but it's also true that a *preexisting emotional state* can influence *how* people learn and what they retain. Anxiety, for instance, can reduce someone's ability to grasp concepts and remember what they learn. Educators and researchers knew about the connection between emotion and learning for years—they just couldn't harness that information to improve classroom learning.

Every individual in a classroom features a unique personal experience and range of emotions. Today, facial recognition software bridges the divide between what we say and what we emote, giving educators an opportunity to create a better learning environment for every student. Identifying frustration, boredom, and fear can improve an educator's ability to provide.

One academic researcher, Sidney D'Mello with the University of Notre Dame, stands out for her work connecting the dots between emotions and student behaviors. Research from individuals such as D'Mello will likely affect the widespread adoption of emotional recognition technology in the education space. In addition to facial recognition, some programs may also record heart rates and other biological cues that reveal an emotional state.

Computer-driven solutions may change the way teachers and computer programs interact with students. Concepts such as empathetic mirroring may allow avatars to respond to emotions such as frustration or excitement with appropriate encouragement.

Be Cautious With External Emotions

While the benefits of gauging emotion in the classroom are clear, privacy remains a significant barrier to widespread adoption. Researchers and developers must find a clear line between what is and isn't private before moving forward with wide scale dissemination. Drawing the legal boundaries between what companies can and can't use without asking permission will significantly affect the future of emotional tracking technology in the classroom.

Furthermore, these programs can't always recognize the inner feelings behind certain biological markers. The moment programs start misreading signals or reading into something too personal and private for the educational setting, a student may feel betrayed, or worse. These factors could derail the benefits if not adequately addressed.

For now, we're still far away from meaningful or widespread application adoption. Until then, we can follow researcher progress, test out new programs, and see what the future holds.