

What is the difference between calming a panicking child and a room of panicking children? Volume? What do you do if you can't project your voice so it's heard? Sometimes when the noise levels of the class border an unacceptable level, teachers will play a mindfulness video on the classroom SmartBoard. Students' attentions are drawn to the board and begin to follow along, bringing the noise level down so it is filled with the sounds of breathing. In one classroom students were busy cleaning up after a lesson filled with paper and scissors when suddenly a scream pierced the room. This scream was quickly joined by multiple other screams. These screams collided together as the students swarmed out the door. A student had found a dead bee and the frightened children had re-enacted a stampede reminiscent of *The Lion King*, thankfully without any injuries or deaths. What skill was needed then? Lightning-fast reactions? Now imagine that same scene, but this time the students are wearing a SmartEmotion Watch. SmartEmotion senses students spike in adrenalin and sends a cooling pulse to the students.

From a desire to promote good choices and student agency, SmartEmotion Watch was born. A team of educators and researchers worked together to develop a Social Emotion Learning (SEL) app that could act as customized emotional training wheels for children. The app sought to combine common SEL practices taught in classrooms such as journaling, sensory jars and breathing exercises. The app tracks emotions by sensing spikes and drops in chemicals and brainwaves. These fluctuations cause the app to prompt the user to record their emotions and trigger(s). Mindful of their biases, the app's designers and creators decided a subject-dependent algorithm, as recommended by Liu and Sourina (2014), was best to combat their biases. Children can start off using the app as young as 4 years old. The prompt is a range of 3-5 emojis ranging from negative, neutral to positive with the option for users to add draw their own emoji. When users choose to draw their own emoji, the emoji is stored and added into the emoji database along with the associated fluctuations in chemicals and brainwaves. When the child becomes more literate, they are given the option of making word associations with the different emojis. When the user is ready and interested, words replace some or all emojis, depending on the user's preferences. As Kress (2005) explains, words are "(relatively) empty entities—in a semiotic account they are signifiers to be filled with meaning rather than signs full of meaning, and the task of the reader is to fill these relatively vacant entities with her or his meaning" (p. 8). Like the emoji prompts, the word prompts consist of 3-5 choices with the option to manually add in a word that is not suggested by the algorithm. The app was created to work in partnership with children, rather than to dictate what children should do, so while the app will use cooling pulses to encourage users to stop and think, the app will not tell users how to think. Students are taught that technology is something they must work with rather than use and in this relationship, they are the CEOs responsible for their choices and any resulting consequences.

Concerns that the app could eradicate children's natural instincts of fight or flight, the app can be set to record brain chemicals and brainwaves for reflection later on, or the app could be set to be turned off for a period of time during activities designed to nurture children's instincts, like "risky play" or "outdoor play".

Currently there is interest in using this data saved by the app in other contexts. Unless parents are granted special access, for example in the case of children receiving SEN support, parents have access to their child's data until the end of the lower primary years. Some parents have asked for more access and others have requested schools monitor the data to safeguard against bullying or harassment. While there are merits to collecting and monitoring student data for these purposes, the creators of SmartEmotion Watch are adamant that the app remain as a supportive tool to promote SEL growth and that adults use those early primary years to develop good relationships with the children they mentor/parent so that the children will be comfortable approaching them for help when the app cannot be used to probe a child's inner feelings.

It's impossible to consider the communication needs of children without considering the communication needs of educators. While it is common for student teachers to not learn much about report card systems because school districts often change them every couple of years, there was a trend in the 2020s amongst schools in the UK to use and stick to [OTrack](#), a bespoke pupil tracking program designed to track children's progress from the Early Years until high school graduation. KPIs for each subject are added based on the English National Curriculum (ENC), with bespoke options for individual schools and levels. KPIs for the primary years are blocked out in one of four colours, red (not taught), orange (developing), green (meets year level expectations) and lilac (exceeds expectations). By using these KPIs, teachers can easily identify which KPIs from previous years need to be put in focus. OTrack's system is designed to be easy and quick to use, thus freeing up time for teaching and learning. In an effort to retain teachers and prevent burnout, a wealth of resources is available nationwide for ENC teachers. The minds behind OTrack created AllAligned and put all these resources together in one data bank and connected each lesson with related KPIs. Now when teachers input their class' data, AllAligned will analyse the overall data of the class and suggest different lessons for the teacher to choose from. If the teacher uploads their curriculum overview, AllAligned will make suggestions based on where in time the class is on the overview. If teachers have not created groups in the system, AllAligned will create groups and suggest scaffolding and extension activities according to the data. Choices and modifications made to lesson plans used from the database are saved into the teacher's AllAligned account.

The public's initial response was to question the necessity of teachers; however, research has shown that feedback is best received verbally. While technology could be used to access student work and performance, students learn more from verbal feedback (William, 2011). One issue schools have faced is losing competent and dedicated teachers to burnout. With educational technology making bounds and leaps, teachers are expected to keep up and integrate educational technology into the classroom. To paraphrase Dr Vallor's (2018) words, AI can walk, but it needs a co-pilot to fly. Technology is not the solution, but part of the solution. Technology such as AllAligned allow more non-contact hours to be used for teacher development so they can do class visits into other teacher's lessons, for experienced teachers to mentor new teachers and for continuing professional development.

As a result of AllAligned, teachers can now speak of students' progress over the years rather than a snapshot. Trends in year groups and across the school can be identified as areas for schools and teachers to work on. Teachers can focus on building foundations, knowing that any gaps in the KPIs will be brought up by AllAligned to the next school year's teacher.

Are these forecasts a tad too optimistic? Perhaps, but with the current trends in social media and Facebook, now called Meta, it's clear that technology and the algorithms that dictate their actions can not continue as they are. There is only so much an algorithm can do, so keeping in mind Dunne and Raby's (2013) belief that what needs to be changed are people's values, beliefs, attitudes and behaviour, these apps were designed to be interactive enhancements rather than replacements. These apps were designed with the intention of bettering current educational practices rather than creating a life of leisure teaching. Humans need to see technology as interactive tools that will transform their lives for the better, not as something to replace our responsibility or thinking.

Links and references made in this podcast can be found on this episode's webpage.

Thank you for listening and see you next time.

References

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