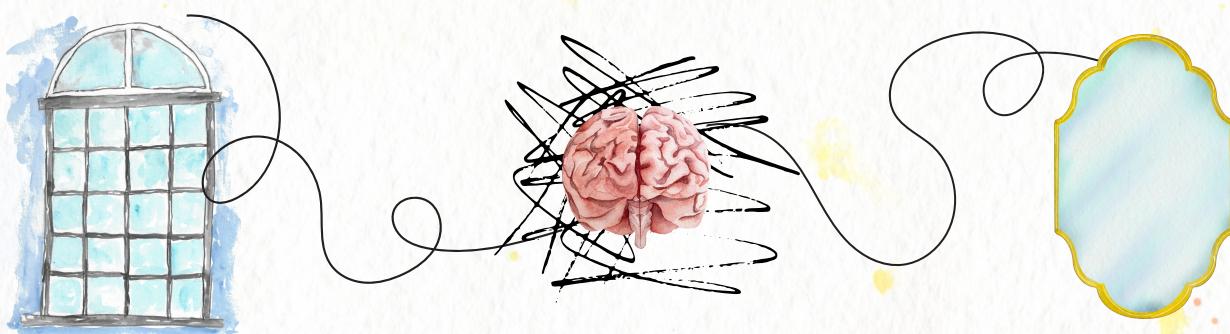


## The Social-Emotional Cost: Meaningless Material

Beyond its impact on the opportunities students have to practice and develop complex, higher-order cognitive skills, the high attentional demands of social media platforms and mobile devices are also making it more difficult for students to practice the social and emotional processing of information that allows them to consider the abstract, longer-term, moral, and personal implications of their experiences. In short, the attention economy is likely undermining students' opportunities to engage in deep, meaningful, authentic learning. To demonstrate how this might be happening, let's consider what happens to the brain of a person subjected to constant environmental demands on their attention.

To start, we should acknowledge that neuroscience of attention is a vast and complex field in itself, and what follows is a greatly simplified explanation of a very complicated dynamic between multiple networks and brain functions. So, as we go about our lives, our brains are constantly activating one of two networks related to attention. Dr. Immordino-Yang offers the helpful labels of "Looking Out" and "Looking In" to describe them.



- The first is engaged while you are attending to your external environment, or "**Looking Out**" — when you're having a conversation, watching a movie, writing an email, etc. The second is activated in the spaces between, when you're not doing a task or attending to anything specific — maybe during a long bus ride, or while you're waiting for something.

## The Social-Emotional Cost: Meaningless Material (cont.)

In the neuroscience literature, this second network is referred to as the “Default Mode Network” because it’s our default mode of brain activity. However, describing this second state as “**Looking In**” is perhaps more illustrative. Without a task to focus on, our minds don’t simply turn off or stand idly by — they wander, reflecting on memories, imagining future scenarios, building narratives, and replaying social interactions. This kind of “constructive internal reflection”, as Dr. Immordino-Yang describes it, allows us to synthesize new information, reflect on its meaning, and understand its relevance to our life. In other words, “**Looking In**” supports our ability to process the personal, social, and emotional implications of our experiences.

Returning to the classroom, we know that deep, meaningful, authentic learning depends on these same processes of meaning-making, synthesis, and reflection that are supported while we are “**Looking In**”. It is precisely the connection that learners make between a learning experience and their identity, beliefs, and cultural values that renders the new knowledge and skills meaningful, and therefore useful. As Dr. Immordino-Yang writes, “*knowledge and reasoning divorced from emotional implications and learning lack meaning and motivation and are of little use in the real world*”. This means that opportunities for students to activate their “**Looking In**” networks are crucial for the social and emotional processing that leads to robust, transferable learning.

Here’s the problem: our “**Looking In**” and “**Looking Out**” networks have a delicate relationship. They are anti-correlated — when one is activated, the other is deactivated... you might picture a see-saw here. As mentioned previously, our “**Looking In**” network is active by default, which means our “**Looking Out**” network is deactivated by default. However, as soon as something grabs your attention, like a phone notification — the see-saw shifts. Suddenly, your “**Looking In**” network is deactivated, and you begin “**Looking Out**”, perceiving and responding to the stimulus in your environment. The networks exist in a kind of balance, allowing you to pay attention when necessary, and engage in that “constructive internal reflection” process in your down-time.

3

## The Social-Emotional Cost: Meaningless Material (cont.)

Sounds great, right? **But what happens when we are placed in an environment that constantly demands our attention?** To put it simply, our “Looking Out” network begins a tyrannical reign, leaving less and less time for “Looking In”. Opportunities for mind-wandering, internal reflection, and the social and emotional processing that helps us make sense of their lives get squeezed out, usually by the magical rectangles in their pockets. Break between classes? Grab your phone. Elevator ride? Grab your phone. Walking across a busy street with vehicles whizzing past you? You guessed it — grab your phone! Thanks to an array of devices and platforms designed to capture and monetize our attention, we have less and less opportunities to process the personal, social, and emotional implications of our experiences. Instead, we are more inclined to interpret the world around us through its surface features.

While this is alarming in general, it may be downright catastrophic when we think about the effects of this phenomenon in the classroom. If we know that deeply processing the personal, social, and emotional implications of new information is what leads to meaningful, useful learning, and the attention economy is quietly eradicating moment-to-moment opportunities to engage in that very process, then it's possible that our students are being biased towards learning new skills and knowledge in a way that inherently will be difficult to transfer and apply outside of the classroom. In other words, **the attention economy could be affecting students at a neural level in a way that undermines their opportunities to engage in deep, meaningful, authentic learning.** If we are committed to preparing ALL students to be successful, ensuring that their learning is transferable and applicable to the real world should be among our top priorities — which means this current trend should be among our top concerns.

Keep reading below!

4

What Does Learning Really Look Like?

