

Teaching²: Psychology and Neuroscience in the Classroom

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Over the past few decades, there has been a dramatic shift in the educational philosophy that guides professors. The predominant view of teaching and learning in higher education was once embodied in statements such as “it’s the student’s right to fail.” This philosophy was one of exclusion, perhaps appropriate for a time when higher education was the privilege of the talented few. But now, in “The Knowledge Age,” higher education is no longer the purview of the few, but the necessity of the many.

As more students pursue a college degree, there is greater variability in the level of academic skills they bring to the classroom. In addition to the cognitive skills germane to academic disciplines, professors must concern themselves with important noncognitive skills students need to succeed.

We began our careers not as college professors, but as clinical psychologists. The same principles that make for effective interactions with patients in individual psychotherapy sessions can be applied to the classroom setting to enhance learning and inclusion.

Relationships Matter

The most important element that leads to successful outcomes in psychology is the quality of the relationship between the clinician and the patient. It is only within the context of a solid relationship that specific techniques become useful. Building the appropriate relationship with students in the classroom is similarly important. Forging optimal classroom relationships where learning is enhanced hinges on assuming an engaging presence, building rapport and bonding with the students, using active placebos, building structures that support risk taking, and using behavior modification when necessary.

Brain-Friendly Instruction

The classroom is a sensory and emotional space that can trigger negative memories for students and make them feel discouraged and defeated. Add to this the fact that the human attention span is about ten minutes long before boredom and distraction set in, and it’s not hard to understand the difficulties in capturing and maintaining students’ attention. So, how can instruction be made brain friendly and engaging?

- Focus on the big picture of what is being taught before getting into the details.

- Make presentations rich by engaging as many sensory channels as possible.
- Regain students’ attention when they begin to lose focus.
- Minimize the level of stress in the classroom. Positive emotions are more conducive to learning than negative emotions.

Information deemed important is gradually transferred from working memory into long-term memory. Psychotherapeutic research, as well as research in the neuropsychology of learning, suggests that the strength of that installed memory is dependent on the use of five factors during the presentation of the information: duration, intensity, multimodality, novelty, and personal relevance.

Make Learning Active

The gold standard treatment strategy used in psychotherapy is cognitive behavioral therapy (CBT). Success using this approach is significantly enhanced when patients become aware of their own faulty thinking patterns, rather than when the treating psychologist merely reveals it to them. This method is also effective in the classroom, where professors should think in terms of uncovering material, rather than merely covering it. It is much more fruitful for learning acquisition to ask students questions that help them discover the information themselves. Another way to use questions to make learning active is to employ structured, dyadic peer interactions and collaborative learning opportunities.

Imagine Success, But Consider Obstacles

Achievement falls into two separate dimensions: motivation, or the desire for a goal, and volition, or the ability to do what is necessary to achieve a goal. Professors can encourage achievement by asking questions that help students link their motivation to their volition. In psychotherapy, the first critical question is “What do you want?” After elucidating this, the follow up question is “What is stopping you from getting it?” The second question is where the work of change is usually engaged. This is no different for our students. They have a sense of what they want in their classes and in their lives, and they can vividly imagine it in a way that comforts them. Motivation and volition are enhanced when individuals dwell on the obstacles to their success in addition to visualizing pathways to

success.

Create an Emotionally Regulated Classroom

Many students are unable to control their emotions. They have difficulties with anger, anxiety, depression, and lack of impulse control. Professors teach more than just course objectives; they model for students how to feel, how to react to others, and how to handle stress. If a classroom is to allow emotional expression to be conducive to learning, professors must show the ability to regulate their own emotions.

Use Effective Classroom Communication

How professors communicate is inextricably connected to how well their students learn. What makes for effective communication in a classroom setting? It is important to sequence communication with students like Aristotle's Three Artistic Proofs. Professors should begin from a foundation of trust (Ethos) in the relationship, then communicate their understanding of the position of the student (Pathos), before communicating their own position or needs (Logos).

Deal With Challenging Students

A mindful application of the principles outlined above will short circuit a whole host of problems that arise in the typical classroom. However, it will not eliminate them. It is useful to remember how the word "crisis" is written in the Chinese language. It consists of two characters indicating danger and opportunity. Handled with aplomb, problems are opportunities to forge bonds and teach critical skills. Handled clumsily or ignored, and the seeds of future disruption have been sown.

A useful way to frame most classroom problems is to consider them as manifestations of deficits in students' noncognitive skills and, therefore, opportunities to strengthen those skills. For example, private conversations or interruptions while other students are answering questions or listening to a lecture can be considered to be a deficit in self-control. The failure to put a phone away after being requested to do so is a failure of emotional intelligence as seen in the lack of self-awareness, lack of empathy, and mishandling of relationships by provoking possible conflict. Attributing poor performance to being a bad test taker is a failure of optimism and also of perseverance. And, failure to engage in the desired classroom conversation and inquiry can be considered a lack of curiosity and courage.

Obtain Feedback

In order to determine if a desired outcome has been realized, psychotherapists assess their patients. Sometimes this takes the form of standard and validated questionnaires, but most often this assessment comes in the form of frequent discourse and dialog throughout

the whole process. How are you doing? How have you been feeling? What changes are you seeing? What have been the most important things you've learned? What obstacles have you been facing? What have you done about them?

Tests and exams provide some evidence of students' learning progress. But feedback should not be limited to assessing how well students are learning course competencies. They should also assess the mood in the classroom. Have students enjoyed their learning experience? Do they feel the classroom environment is conducive to learning? Do they feel safe in contributing to the class? What would make it easier? What would they change if they were the professor teaching the class? What would they absolutely keep? What other suggestions might they have that they feel would improve their learning experience? The feedback should also measure how well students are acquiring cognitive and noncognitive skills that support their success.

These eight methods make the teaching and learning experience more effective, fun, and inclusive!

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