

the death of silence

A critique of constructivist teaching

ELIOT BLACKMOORE | REPORTER

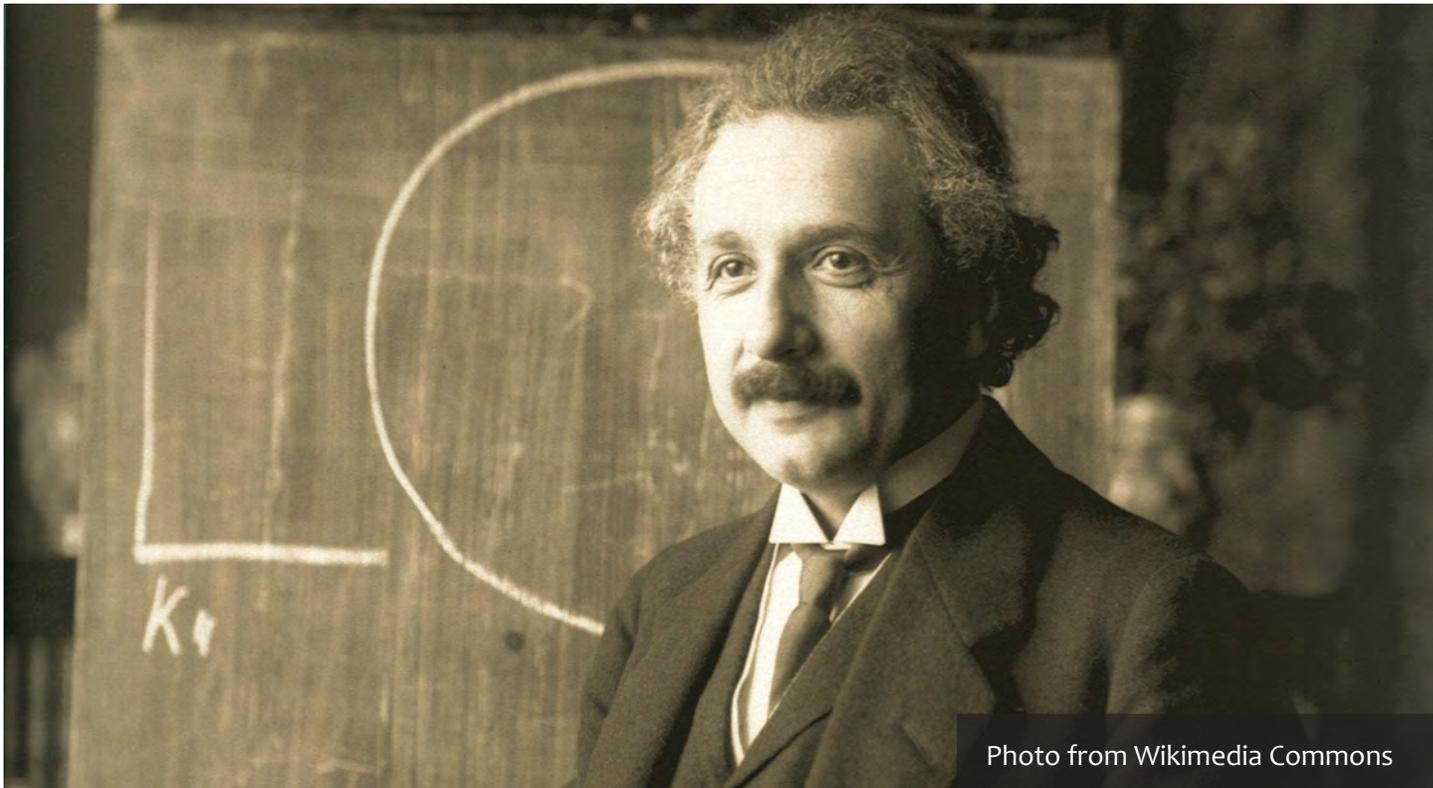


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Today is a time of talking like no other. With 2.4 million emails sent every second, six billion calls made each day, and seven trillion text messages shared yearly, the modern breadth of worldwide communication is unparalleled in human history. Our languages gush from every crevice of society: forming communities, developing relationships, and ensuring that our increasingly interconnected world is one without silence.

Virtually all American workers now spend time on teams and over 70 percent inhabit open-plan offices, in which all space is communal. During the last decades, the average amount of space allotted to each employee shrank 300 square feet, from 500 feet in the 1970s to 200 feet in 2010. Education administration has evidently observed this trend, as tribes of desks have banded together in today's classrooms, forcing the modern scholar to constantly collaborate with their peers.

But the death of quiet is not a victimless tragedy.

In education, they call it constructivism, collaborative learning, discovery-based inquiry, but each of these names hides the same principles.

All describe teaching methods based on the

belief that learning occurs best when students are actively involved in a process of meaning and knowledge construction as opposed to passively receiving information.

In Clayton, constructivist principles are clearly depicted in the Honors Freshman Physics Classroom. According to a former physics teacher, Rex Rice, "constructivism meant that students were to build their own understanding through the classroom and the laboratory while the teacher filled the role of a facilitator of growth instead of a disseminator of information."

Students in honors freshman physics write

**"The monotony and solitude
of a quiet life stimulates the
creative mind."**

--Albert Einstein

on whiteboards to demonstrate their knowledge of certain topics or problems. The class works together to perfect the whiteboards to the best of the class's ability while the teacher guides the

class conversation. Clayton science classes are a microcosm of a larger social trend in education.

Math classes across the country are becoming more centered on group thinking to come to solutions rather than solitary understanding.

Social studies classes are starting to revolve around classroom discussion rather than solitary research and information gathering techniques.

For the student, this means that the classroom experience is one of constant interaction with their peers.

The environment of the constructivist classroom benefits students of a certain type, those with strong social skills and a desire to collaborate, but it can hurt students of another.

Emory University neuroscientist Gregory Berns found that when we take a stance different from the group's, we activate the amygdala, a small organ in the brain associated with the fear of rejection. Berns calls this "the pain of independence."

This pain can be a trigger for nearly seven percent of Americans suffering from social anxiety disorder (SAD). Specific common fears experienced in this syndrome include that of small group discussion and having to do something by being watched.

Constructivist teaching can create a potentially nightmarish classroom experience for people with SAD. Those suffering from this disorder may not appear anxious, and a teacher occasionally scanning a classroom is likely to fail to detect it or misinterpret it as a poor social skill.

For that matter, individuals with subpar social skills, such as the more than fifty percent of the world which is introverted, may also struggle to become active in the learning process in the way that constructivist teaching attempts to accomplish.

So the question arises, must a student embrace the constructivist teacher's social vision to succeed in the class?

Numerous studies have demonstrated the negative effect SAD and other types of anxiety disorders on individual student academic success. It is common for a constructivist teacher to assign grades based on how students work with their peers during group projects, even if such collaboration is not a specific term goal for the class. In Clayton, the answer to this question is maybe so. Core to the Clayton School District's values is "independence, creativity, and critical thinking."

The District desires that all Clayton students demonstrate these characteristics once they complete their education. The district plans to accomplish this by "building individual motivation and social interaction for purposeful engagement in learning."

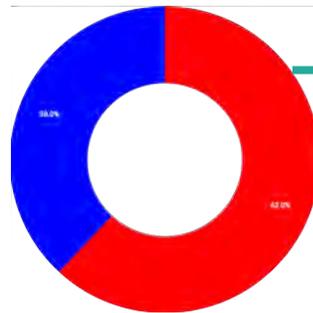
Constructivist thinking appears to be deeply woven in the District's mentality, and this can lead to a problematic classroom experience.

One in-class practice which demonstrates the negative effect of the constructivist model is small-group presentations. In my experience at the Clayton School District, I have been subjected to many of these classroom projects.

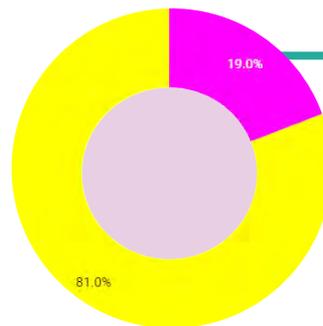
Inevitably, the teacher brings the class together and explains that the next assignment is to create a PowerPoint presentation with a group of peers on one topic or another. The goal of this project is always to encourage students to take initiative for their own learning and to incorporate multimedia learning devices into the everyday classroom experience.

However, this project falls short of these goals in a few important ways. According to Keith B. Hopper, professor of instructional technology at Kennesaw State University, in an attempt to encourage collaborative learning, the teacher, has inadvertently subjected "all students in the class... to many linear presentations, although these will be developed and delivered by students with neither content expertise nor teaching skill."

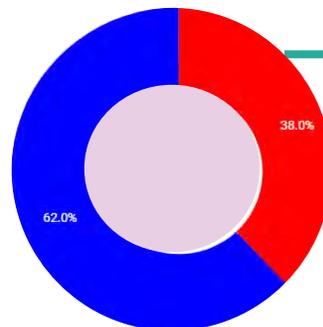
Hopper concludes that "there is no is no compelling instructional advantage in students developing PowerPoint presentations," and that "it has been [Hopper's] perception that this shallow use of technology usually fails as a cognitive tool,



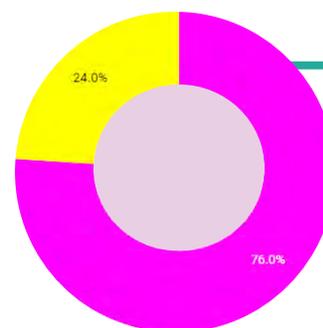
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and student focus is shifted away from concepts and toward trivial aesthetic and technical issues.”

And yet, in the constructivist classroom, this type of project is frequently assigned. The justification for the project is often that collaboration makes students more active in the learning process, but not only do some types of constructivist assignments alienate the large population of individuals with poor social skills but also doesn't produce valuable lessons for extroverted students.

In the constructivist classroom, collaboration often comes at the cost of strong lessons.

Even in a world flooded with constant communication, society still remembers the image of the hunched genius scribbling a masterpiece in the dead of night.

Albert Einstein, practically the paradigm case of intelligence has been popularly attributed with saying “the monotony and solitude of a quiet life stimulate the creative mind.”

And, unsurprisingly, Einstein wasn't wrong.

Research strongly suggests that people are more creative when they enjoy privacy and freedom from interruption.

In a study by consultants Tom DeMarco and Timothy Lister, popularly referred to as the “Coding War Games”, the performance of a sample group of 600 coders at 92 different companies.

They found that what set apart programmers at high-performing companies wasn't greater experience or better pay.

What distinguished the best programmers from the worst was how much privacy they enjoyed.

62 percent of the best performers said their workspace was sufficiently private compared with only 19 percent of the worst performers. 76 percent of the worst programmers but only 38 percent of the best said that they were often interrupted needlessly.

Numerous other studies have demonstrated open-plan offices make workers hostile, insecure and distracted and that people whose work is interrupted make 50 percent more mistakes and take twice as long to finish it.

In context to education, these findings are astounding. If students work better when they have some level of privacy, why is the norm to form “pods” of desks?

Why is collaboration constantly a centerpiece of education?

Often times, the justification is simply that students will have to work in open plan offices when they enter the workforce, so they might as well start learning how to handle this while they're in school.

Hopper says the fact “that a student constitutionally prefers, even needs isolation and silence to learn is not something the constructivist teacher should, or even could, correct ... requiring [collaboration and active engagement in a community of learners] as a condition of success in the course is at best injudicious. At worst, it is a heavy-handed abuse of power. It is a usurpation; it is to inflict a sociopolitical bias and agenda on a powerless audience.”

While his words are strong, his criticisms remain valid.

Because the process of learning in constructivist classrooms is grounded in the subjective understanding of the group, the idea of an ab-

solute truth is often undermined, leading to the dangerous conception that one truth is as good as any other (Hirsch, 1996; Phillips, 2000; McCarty and Schwandt, 2000; Loveless, 2001).

This ensures that diversity of thought is encouraged in situations where conformity is necessary to bolster group understanding.

Joint inquiry constitutionally values constructed understanding above a teachers' ability to guide instruction, potentially resulting in an inability to correct student errors.

The quality of constructivist education is thus highly contingent upon the quality of the student body; what questions are asked and what things are challenged are not universal between classes.

For that matter, class dynamics themselves are often shaped by a minority of students. The collaborative aspects of constructivist classrooms tend to produce a tyranny of the minority, in which the voices of the few garrulous students overshadow those more quiet ones in dissent, leading to forced conformity in the emerging consensus.

Students deserve a better education than the current constructivist model provides.

Collaboration isn't bad to encourage, but making a student's understanding of material contingent upon their ability to communicate and interpersonally express themselves is unacceptable for the majority of students.

The quiet pupil should never be forced to ideologically conform to the socio-pedagogical tendencies of a constructivist to succeed in education.

In this age of hyperconnective communication, the death of silence must not be the cost of education. 🌐



Photo from MCT Campus/ WTKR-TV