

# Student Boredom: Frequent, Devastating, and Preventable

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**V**ery often students are bored in class. The consequences of student boredom are devastating for learning as well as for student liking for school, class, content, and teacher. Students

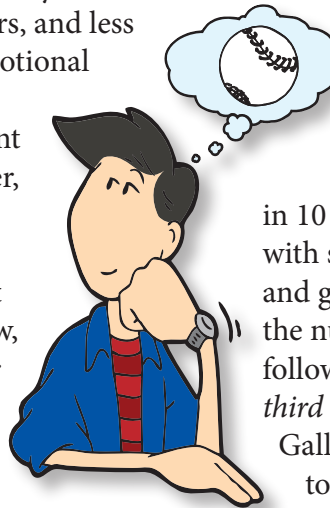
who are bored in class are more likely to drop out of school before graduation, less likely to become independent, life-long learners, and less likely to experience healthy social-emotional well-being. After documenting the frequency and consequences of student boredom in the first parts of this paper, we then examine the causes. In the final section of this paper, we analyze the most powerful antidote to student boredom, engagement, and reveal how, with relatively little effort, any teacher can dramatically boost student engagement.

### Part I: Frequency of Student Boredom

A remarkable number of students find school boring. The National Association of Independent Schools (NAIS) partnered with the Center for Evaluation, Policy, & Research (CEPR) at Indiana University to administer the High School Survey of Student Engagement (HSSSE). In spring 2020, 3,236 students in 17 NAIS schools located in 11 U.S. states completed a survey that included data

on student engagement. Results included the following: *Two out of three high school students said they are bored in class every single day!*<sup>1</sup>

The Indiana University's High School Survey of Student Engagement (HSSSE), published in 2007, reached more than 81,000 students in 110 high schools across 26 states, predominantly in the Midwest. Among those surveyed, 75 percent expected to attend college. *Nevertheless, fewer than 2 percent of students said they are never bored in High School.*<sup>2</sup>

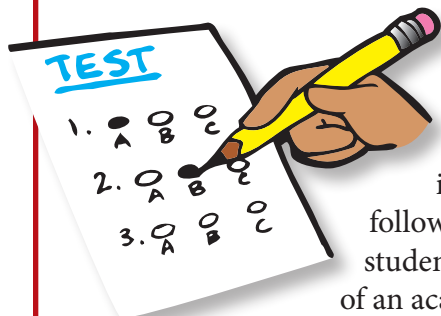


Boredom increases with grade-level. A 2013 Gallup poll of 500,000 students in grades five through 12 found that nearly eight in 10 elementary students were “engaged” with school, that is, attentive, inquisitive, and generally optimistic. By high school, the number dropped to four in 10. A 2015 follow-up study found that *less than a third of 11th-graders felt engaged*. When Gallup asked teens in 2004 to select the top three words that describe how they feel in school from a list of 14 adjectives, “bored” was chosen most often by half the students.<sup>3</sup>

### Part II: Consequences of Student Boredom

The consequences of student boredom undermine the core goals of education. To the extent students are bored in class, motivation and learning decrease. Student boredom is a major

cause of high-school dropout: *Nearly 50 percent of 470 dropouts surveyed, gave as a reason for dropping out of school, was that their classes were boring.*<sup>4</sup>



In 2014, researchers at the University of Munich in Germany followed 424 university students over the course of an academic year, measuring their boredom levels and documenting their test scores. The team found evidence of a cycle in which boredom begot lower exam results, which resulted in more disengagement from class and higher levels of boredom. Those effects were consistent throughout the school year, even after accounting for students' gender, age, interest in the subject, intrinsic motivation and previous achievement.<sup>5</sup>

Student boredom is visible. Facial expressions (apathy) and body language (slouching) of students tell the story as does their fidgeting, off-task behavior including doodling and passing notes, as well as disruptive behaviors. Frequency of disruptive behavior is a barometer of lack of engagement. Perhaps most revealing is the behavior of students at the end of class. When the exit bell rings, students become excited; energy flows back into their facial expressions and body language; some look like the bell is a signal that they have been released from jail.

### **Part III: Causes of Student Boredom**

Many possible causes for student boredom have been proposed. In an article published in *ED. The Harvard Ed. Magazine*, Zachary Jason summarizes his own explanations and those of

experts. Jason and those he cite suggest quite an array of causes:<sup>6</sup>

- **An escalating emphasis on standardized tests**
- **The novelty of school itself fades with each grade**
- **Lack of student motivation**
- **Lack of parental support**
- **Frequency of memorization rather than meaning**
- **The transition with increased grade levels from the tactile and creative to the cerebral and regimented**
- **Emphasis on covering a predetermined curriculum**
- **Lack of student choice over what and how to study**
- **Scheduling that does not align with the bio-rhythm of teenagers**
- **45–50 minute classes that don't allow in-depth exploration**
- **Lack of relevance, meaning, and purpose in the curriculum**

**Rather than blaming students or blaming the curriculum, the primary cause of student boredom is unengaging instructional strategies.**

In a more theory-based approach to understanding boredom, Gayle Macklem overviews the following explanations of student boredom in school:<sup>7</sup>

- **Under stimulation**
- **Monotonous tasks**
- **Resistance to school authority**
- **Little control over activities about which students don't care**
- **Deficits in student attentional controls**
- **Student inability of access and understand their emotions**

Although some of these explanations may play a role in causing student boredom in specific cases, these explanations mostly blame either the student or the curriculum. There is an alternative explanation that will be supported here: The

primary cause of student boredom is reliance on *instructional strategies* which fail to produce equal, frequent, intense engagement.

A theme among those describing the causes of student boredom is the passivity created by direct instruction. Students are viewed as empty vessels to be filled with predetermined curricula. They are expected to 'sit and get.' This attitude among educators was captured by Dr. Rose who now has a doctorate from Harvard University. In high school he had a 0.9 GPA before he dropped out, primarily from boredom. He states, "... *we're still keeping students in the kind of education system... that wants nothing from them in terms of their own ideas. School has already decided what matters and [what it] expects from you. It's like an airplane: Sit down, strap in, don't talk, look forward.*"<sup>8</sup>

### **The Most Frequently Used Instructional Strategy:**

**Call-On-One.** I have given keynote presentations and workshops in 40 countries. In most of those countries I have gone into classrooms to observe teaching and learning. Generalizing from years of observations in many parts of the world, I can say with certainty that the most common instructional strategy used world-wide is a strategy I call *Call-On-One*.

If you are an educator, you almost certainly are familiar with Call-On-One, and you likely have used Call-On-One. The steps of Call-On-One are as follows:

1. Teacher asks a question of the class.

2. Students who wish to answer raise their hands.
3. Teacher calls on one student to answer.
4. Student answers.
5. Teacher responds to the student's answer.

If we do the math of student engagement, we discover Call-On-One is a perfect structure if our goal is to prevent both amount of student engagement and equality of student engagement! It generates student boredom.

## **The most frequently used instructional strategy, world-wide, prevents student engagement and generates student boredom.**

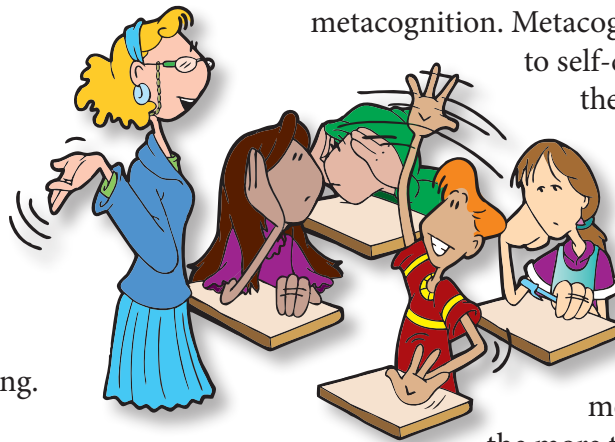
### **Frequency of Student Engagement.**

Imagine you have a class of thirty students and wish to give them one minute each of engagement by asking them to verbalize their thoughts on

whatever you are teaching. We know student verbalization of their thinking is a very powerful instructional strategy. As students verbalize, they listen to themselves and become more aware of their own thinking, a process called metacognition. Metacognition allows students

to self-correct and to elaborate their thinking. Further, as students verbalize, they become aware of what they know and what they don't know making it more likely they will fill in the gaps. The more students verbalize,

the more they become cognitively and verbally more fluent. They are engaged. Verbalization enhances memory: Students remember dramatically more of what they say than what they hear. Many parts of the brain are engaged while verbalizing. While listening to a lecture, mind-wandering is frequent and increases with the passage of time. Students cannot mind-wander while verbalizing.



Given the goal of allowing one minute each for students to verbalize, it takes over an hour to reach our goal if we use Call-On-One! Why does it take over an hour to give each student a minute of airtime using Call-On-One?

The teacher talks twice for each time a student talks, first asking the question and later responding to the student's

answer. And because we are teachers and want to teach, teachers' answers to student questions are generally longer than the student's answer! So, it is one minute per student (30 minutes) and over that amount of time for the teacher (30+ minutes) to give each student one minute!

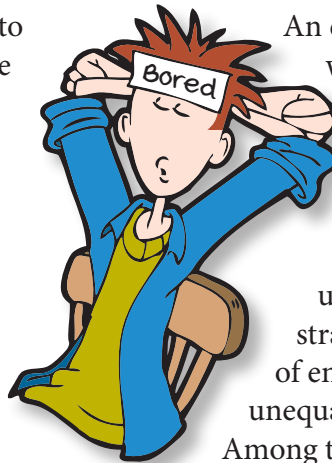
And how are students spending their time in that hour? One minute of active engagement and 59 minutes either mind wandering, looking at the back of the head of another student answer the teacher's question, or listening to the teacher ask a question or respond to the answer of another student.

When faced with this analysis, some teachers protest: *I would never do Call-On-One for an hour!* But in fact, they do. They do five minutes sometime in the beginning of class, perhaps a few minutes mid-class, and another five minutes near the end of the class period. At some point teachers use up an hour of valuable class time to give each student one minute of active engagement. A prescription for boredom!

**Equality of Student Engagement.** Not only does Call-On-One dramatically limit the frequency of student engagement, but it also dramatically decreases the equality of student engagement. Call-On-One as it is

**A universal cause of student boredom is the reliance on instructional strategies that fail to engage most students.**

most frequently used, is based on volunteer participation. That is, only those students who wish to be called on raise their hands. In most classrooms this translates into the high-achievers and highly-motivated students being called upon far more frequently than the low-achievers and unmotivated students. *We call most on those students who least need the practice and least on those who most need the practice!* Because engagement and participation lead to achievement, use of Call-On-One increases the achievement gap.



An explanation of why the world of educators has settled on Call-On-One as their Go-To instructional strategy is at first glance baffling. Why do educators so frequently use an instructional strategy that results in lack of engagement, boredom, and unequal educational outcomes?

Among the reasons Call-On-One is so frequently used are 1) It is an easy-to-implement, content-free strategy that can be used at all grades while teaching any content; 2) When teachers were students, their teachers modeled for them Call-On-One year after year

**When we use Call-On-One, we engage the high achieving students far more than the low achieving students, increasing the achievement gap.**

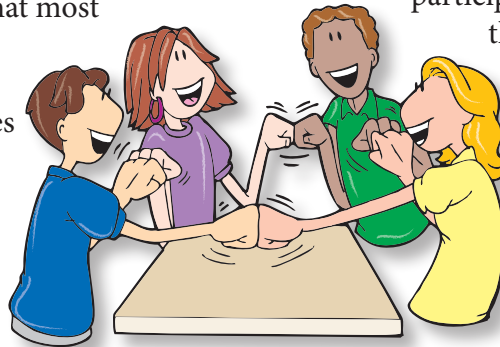
as they progressed through the grades, and teachers tend to teach the way they were taught. Via mirror neurons, Call-On-One was overlearned. It was assumed, that is what teachers do; 3) Schools of education and other teacher-training

institutes have failed to challenge this obviously destructive strategy and have failed to promote positive alternatives.



## Part IV: Preventing Student Boredom

Call-On-One is a habit that most teachers have acquired, but it is a bad habit—it limits engagement, creates boredom, and lowers achievement. The best way to break any bad habit is to substitute a positive alternative behavior. Thus, learning and implementing positive alternative instructional strategies is the most powerful tool we have for eliminating student boredom.



students stand while sharing and sit down when both partners have shared. To equalize participation, for responses longer than three sentences each, the teacher uses a variation of Pair share, Timed Pair Share, in which students each have an equal amount of time, most commonly a minute each. Teachers may have students use positive response gambits to appreciate their partner for their contribution. Because Pair Share takes only a minute or two at most, it can be sprinkled into any lesson to have students express their thoughts about the content. When teachers implement Kagan Structures, active engagement for all students occurs frequently.

For over forty years Kagan Publishing and Professional Development has been developing structures for engagement. Through publications, workshops, and academies, Kagan provides trainings for teachers in Kagan Structures—alternatives to Call-On-One which are content-free, can be used with any curriculum at any grade level, and most importantly, engage all students equally and frequently. By boosting student engagement, Kagan Structures dramatically decrease student boredom with all its negative consequences.

The enormous power of Kagan Structures to create frequent and equal engagement is best seen by example. Let's examine one very simple Kagan Structure: Pair Share. The steps of Pair Share are simple:

1. Students pair up with a shoulder or face partner in their teams, or with a classmate.
2. Teacher announces a topic and how many sentences partners will share, one, two, or three sentences each.
3. Partner A shares their sentence(s).
4. Partner B shares their sentence(s).

There are variations in how Pair Share is used. For management, the teacher may have seated

As we saw, to give each student in the class a minute to share using Call-On-One, it takes over an hour of valuable class time. In contrast, to give each student a minute to share using Timed Pair Share it takes a little over two minutes: The teacher asks a question and states how much time each student will have, and then each student shares for a minute. In a little over two minutes with a Timed Pair Share students have a minute each of active engagement for the same amount of active engagement it takes over an hour with Call-On-One.

The greater active engagement in classrooms using Kagan Structures compared to those using Call-On-One, was demonstrated empirically by psychologists at the State University of New York. They measured the percent of students responding to a teacher's question when different instructional strategies were used. When Call-On-One was used in a sixth-grade science class, on average 15% of the



students responded to a teacher's question. In contrast when two different Kagan Structures for engagement were used the average percent of students responding to a teacher's question was 85% with Show Me and 98% with Numbered Heads Together.<sup>10</sup>

The additional important advantage of Kagan Structures is that it provides equal engagement of high and low achieving students whereas Call-On-One provides far more engagement for high achieving students than for low achieving students because the high achieving students far more than the low achieving students have their hand up to be called upon.

Students prefer Kagan Cooperative Learning Structures. A different experiment conducted by researchers at the State University of New York tested the attitudes of students who experienced Call-On-One and a Kagan Cooperative Learning structure, Numbered Heads Together. Following experiencing alternating blocks of time with each structure, students completed a survey to test their attitudes. Over 80% of the class responded to the survey, saying Numbered Heads Together:

- Better helped them learn
- Was fair for all
- Helped them get along better with others
- Should be used in other classes
- Resulted in other students thinking them smarter.<sup>11</sup>

This last comment, that other students thought them smarter, is understandable because during Numbered Heads Together all students respond and their responses are viewed by their peers. Students who would not have raised their hands during Call-On-One participated in Numbered Heads Together, revealing their ideas to their classmates.

Pair Share is just one of over 200 Kagan Structures for Engagement, instructional strategies carefully designed to offer frequent and equal engagement. Different Kagan Structures are designed to foster different types of learning, including, mastering facts and information, mastering procedures, sharing information,

resolving conflicts, improving social skills and social relations. Within each category of functions, different structures are designed to foster different specific skills.

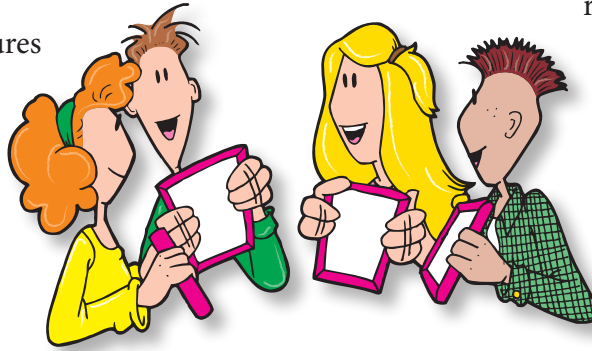
For example, among the thinking skills structures, different

structures are designed to foster fifteen different thinking skills, including, categorization, induction, deduction, brainstorming, analysis, synthesis, and evaluation. A defining characteristic of all Kagan Cooperative Learning Structures, however, is equal and frequent student engagement.

When Kagan Structures for Engagement are implemented, the positive outcomes of frequent, equal engagement consistently result, including:

- Increased Academic Achievement<sup>12</sup>
- Reduced Achievement Gaps<sup>13</sup>
- Increased Student Satisfaction<sup>14</sup>
- Increased Time on Task<sup>15</sup>
- Decreased Disruptive Behaviors<sup>16</sup>
- Increased Prosocial Behaviors<sup>17</sup>
- Improved Race Relations<sup>18</sup>

As educators, we have a choice: We can continue to use traditional instructional strategies that foster disengagement, boredom, and increased achievement gaps, or we can implement instructional strategies that produce equal and frequent engagement and result in a host of positive consequences.



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