

The Effect of Standardized Testing on Student Perceptions of School

A Research Paper submitted to the Department of Engineering and Society

Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science, School of Engineering

Austin Thomas Chappell

Spring 2025

On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Advisor

Karina Rider, Department of Engineering and Society

Introduction

Everyone who grew up in the United States public education system remembers the dread associated with end of year standardized tests. Regardless of your actual understanding of the material, you were entering a test that could be wildly different from ones you had in class, or you could just be a bad test taker and a test is determining your worth as a student.

Most students who enter public schools in the United States end up disliking school and develop a bad taste for important life skills such as learning and reading. Some people would argue that students do not enjoy school because of the social dynamics present at school compounded with mental challenges such as anxiety and depression. While this certainly is a contributing or even main factor for some students, this cannot explain the general trend for most students disliking school. I believe that one of the main sources of this problem comes from how we keep schools accountable for the education of students, namely standardized testing. This paper will answer the question: “How does standardized testing affect students’ perspectives of school in the United States?” I will discuss how standardized tests make students feel like learning is not the main point of school, which leads to a development of a lack of trust in the school system. I will show how this lack of trust is rooted in the policies that affect how school systems operate.

In order to accomplish this, I collected numerical data about the proficiency rates among students and research papers that discuss how legislation affects the behavior of all actors present in schools. I analyze the impacts and ethics of classroom legislation using Max Weber’s theory of power, mainly looking at how this legislation enacts traditional and legal power over students,

teachers, and school administration by incentivizing students to sacrifice parts of their lives outside of schoolwork in order to study and for teachers to teach the test (Allen, 2004).

Background

The main way to determine whether any education system is working as intended is to assess the students in some way, however the purpose and assessment methods are not constant throughout the world. For example, in Europe, the primary purpose of secondary education is to prepare those students who want to continue their education and prepare them for entrance exams for their areas of study, however in the United States, secondary education is intended for all students in order to prepare them to live life as an adult (Wiliam, 2015). Since I live in the United States, this paper will discuss mainly the systems in place in the United States and their impact on students.

The United States federal government passed bills such as the “No Child Left Behind Act” (NCLB, 2002), which mandates that each state hold standardized tests at the end of each academic school year to determine how well each student, teacher, school, and system is performing. NCLB has since been replaced by the “Every Student Succeeds Act” (ESSA), but the changes that ESSA provided “aren’t felt as keenly by teachers, parents, and kids” (Blad, 2025). Therefore, it is important to understand both NCLB and ESSA before exploring how they impact students.

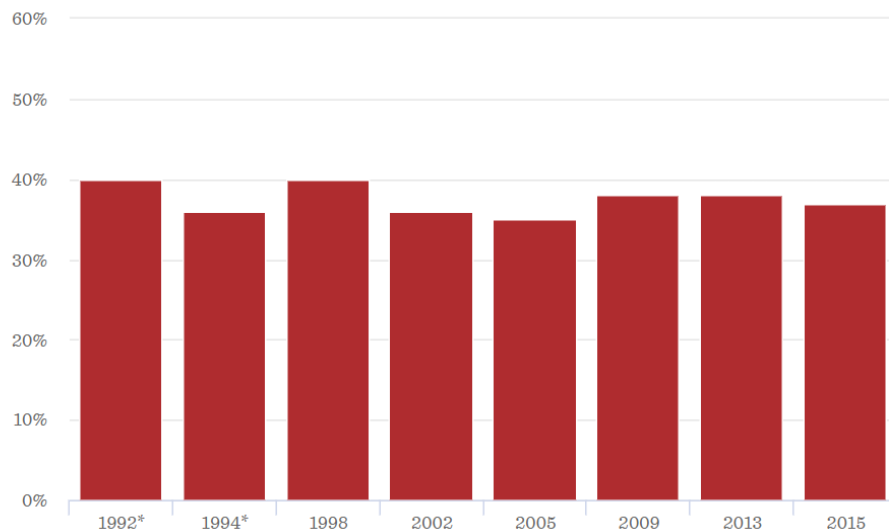
NCLB set a federal standard that was intended to hold states accountable for the students in their school systems under the main goal for every student to be proficient in reading and in math (Bush Record, 2014). It mandated end of year tests in both math and reading for grades 3-8 as well as at least once in high school. It also required at least one test for science in grade

school, middle school, and high school. NCLB required the states to ensure that all students are at a proficient level according to these test scores (Jones, n.d.). Schools that were unable to reach the progress goals set could be forced to fire staff, lose federal funding, or receive some other sort of penalty.

Despite there being a clear goal for what the education system is trying to do and federal and state accountability for schools, there were some large problems with the education system in the United States under NCLB. One very clear example of this failure of the system is that the percentage of students who completed all of grade school that are proficient readers decreased since NCLB was passed in 2002, as shown in Figure 1 (Nations Report Card, 2015). If we grant that testing accommodations would have increased 1992 and 1994 scores, then only the time the percentage of proficient 12th graders increased was between 2005 and 2009.

Figure 1

Percentage of U.S. 12th-graders proficient in reading



*Testing accommodations not permitted

This failure of the system was a great concern, not only to the students who were not receiving the education they should, but also to the rest of society, because these students are the future workers who will be around to run the world and take care of everyone older than them once the latter retire, which lead to the creation of ESSA.

ESSA replaced NCLB in 2015, adding more flexibility in the ways that states can ensure their student's academic achievement. ESSA allowed states to use nationally recognized tests for end of year testing, like the SAT or ACT as well as encouraging states not to add unnecessary tests beyond the federally required ones. The biggest change that was made in ESSA compared to NCLB is that it looks at more than just test scores, however the only required metrics are graduation rate and a state-chosen measure for grade schools and middle schools. Also, instead of losing funding for underperforming, ESSA provides more funding, and the school is required to make an improvement plan. ESSA supports a lot more national programs to help students such as a national literacy center and programs as well as supporting the Universal Design for Learning (UDL) teaching method. These changes made under ESSA helped the national graduation rate to increase from 80% in 2010 under NCLB to 87% in 2021 under ESSA (National Center for Education Statistics, 20024).

UDL is a method of teaching and assessing students in a more equitable way by considering individual students' issues with representation, expression, and engagement that can present themselves in traditional testing settings (Rose, 2000). UDL allows for test variation in regard to the way that the test is presented and taken so that all students are able to take assessments in the ways that are most intuitive to them, allowing them to show what they know on the assessment rather than how comfortable they are with the assessment style. UDL was

added to ESSA, to combat some of the shortcomings from other teaching methods that were incentivized by NCLB, which will be discussed later.

Methods

I started my data collection by researching studies that discuss why students generally have a dislike for school. This led to me questioning the differences in performance between school districts and researching why there is a difference there. I found that one possible answer to that question relates to the overall movement of good teachers moving around school districts. To understand why this is the case, I researched the reasoning behind why teachers choose the strategies that they do and why they might decide to change school districts. This led me to the conclusion that standardized testing has a large impact on what, where, and how teachers teach in their classrooms.

To support this research on how students and teachers are likely to react to policies, I collected nationwide student literacy data for different age groups using the nations report card from various years in order to find trends in how students performed in various subjects in order to discover the impacts of large legislation on the performance of students. When doing this, I noticed downward trends in the academic performance data in the years following the COVID-19 pandemic, which lead me to question the ethical responsibility of policymakers to the education of the youth.

To answer this question, I used Max Weber's theory of power. Weber defines power to be "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests" (Allen, 2004). The two important types of power from Weber's theories that I use are traditional power and

legal power. Weber defines traditional power to be power that someone holds over someone else because that is the way that it has worked in the past. This also applies to parents and children, and therefore I will use the same to describe the power that teachers have over students in the classroom. The other type of power that is relevant to this discussion is legal power, which is the power given to someone due to them being in a legitimate, lawfully appointed superior. I will use this to describe the power that policymakers hold over school administrators and therefore teachers.

Findings

Policy Impact on Students

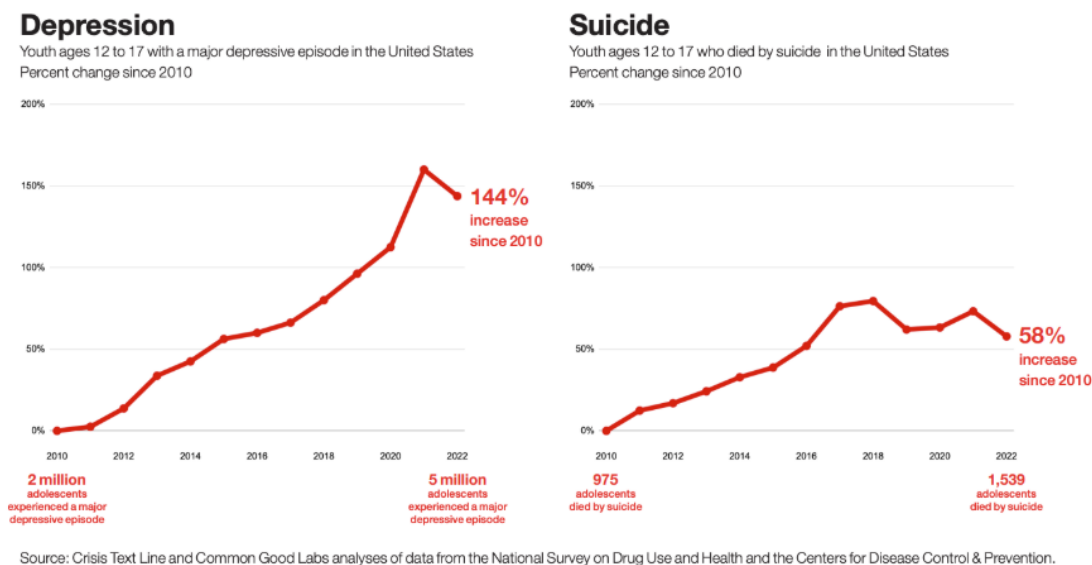
According to a study performed at Georgia State University, the average student in the United States public school systems spends between 20 and 25 hours each year taking high-stakes tests (Behizadeh, 2019). This amount of time plus the many hours that students spend preparing for these tests was found to decrease students' critical thinking skills, because there is only one set of information and viewpoints that they need to consider to pass. This leads to students simply trying to become a database of information that spits out facts instead of engaging in critical thinking and trying to understand different viewpoints, which is what is applicable to life in the real world.

This study takes place even after ESSA and the federal recommendation to reduce unnecessary standardized testing. This shows that the effects of NCLB are still very prevalent and play an important role in schools even a decade after being replaced. Another study that looked at the time students spent in standardized testing found that public schools had standardized tests an average of 16 different school days (Modan, 2023). Using these 16 days and

the 20 to 25 hours of standardized testing and assuming that there is only one test per day, we can determine that the average time that each of these tests takes is between 75 and 94 minutes.

Students tend to put a lot of value on their grades and other measures of academic achievement (Winkler, 2022). It is very common for both students and teachers to attribute value to a score or to a grade, which it is not intended to do. For students, this can deeply affect their self-worth. Students will perceive an unexpected or negative result as greatly decreasing their worth, while a positive one will barely increase their perception of their worth (Crocker et al., 2003). These standardized tests, therefore, have a lot of risk in regard to the value that students see in themselves. This leads to a huge amount of stress on students 16 times each year, because they see their value as a person being at risk if they do not perform well in 1 hour and 15-30 minutes.

While almost certainly not the main factor in the issue, this is a huge problem for the generation that continues to become more depressed and suicidal as shown in Figure 2 below (Torok, 2024). The way that these tests are structured to evaluate students, incentivizes them to study for these tests, and takes them away from the social connections and activities that they need to avoid depression. This highlights the importance of the issues that students can face due to policies and the ethical considerations that policymakers should take, since the practical impacts for students of NCLB and later ESSA could lead to students isolating themselves in the name of their grades, which could end in the loss of a life.

Figure 2**Depression and Suicide Rates in Teens the United States**

This is where the power theories from Weber come into play. Policymakers have power over students in the way that there is a percentage chance that students will decide to spend their time studying for these required exams because of the policies that are put in place, representing legal power. Policymakers need to make sure that they do not overdo the incentives to perform well in school such that they incentivize students to isolate and risk adding onto the increasing depression in the youth.

Other impacts on students due to these policies that require certain standardized tests include issues with students not being able to show their proficiency in these standardized tests, because of the methods in which they are taken (American University, 2020). This goes directly against the UDL teaching method, so it would make sense for ESSA to fix this problem, but, in actuality, ESSA limited the number of alternate tests that could be taken to 1% of all tests, which is not sufficient for all students who would perform better in a different method (Jones, n.d.).

Finally, these tests greatly devalue any subject that does not have its own standardized test, deeply hurting and disincentivizing students from further pursuing the subjects that they might enjoy the most such as history or the arts.

All of these impacts from policies on students make them feel like school is only a place that is stressful, since it mainly stands to decrease the value that they place on themselves.

Policy Impact on Teachers

The impact that these policies have on teachers is important when trying to consider how students feel about school, because teachers are the main figures with traditional power over students that they interact with. The way that teachers use this power that is granted to them will shape the way that students view the entire school entity.

In the NCLB era, a study was conducted to determine the stress in teachers and students in the United States and in Europe, which found that in the United States, teachers are more stressed than students about standardized testing (Wiliam, 2010). Another study interviewed teachers to determine what made the standardized testing stressful and where the pressure they felt came from (Franklin & Snow-Gerono, 2007). The responses indicate that there were threats made by administration that teachers would be fired for poor test scores among their students and that in turn many teachers ended up turning their classroom focus to memorization as opposed to cultivating a love for learning among students. In addition to the threats and pressure to be better from administration, the media, and parents, teachers are extra stressed, because there is nothing that they can do during the testing period to ensure that their class performs well.

The ways that these teachers end up adapting to the pressure are questionable if you have the students' learning as the top priority. One grade school teacher said "We feel so much

pressure that we spend most of the day teaching reading and math. Standardized testing is taking the fun out of teaching and learning. We drill and drill...I don't teach science or social studies in a hands-on way. We learn science and social studies through our reading..." (Franklin & Snow-Gerono, 2007, p. 13). Another teacher mentioned that they are incentivized to not assist their colleagues, since, if you help them out, they might outperform you, and you might end up getting fired.

As we found in the previous section, the systems in place have not changed much since the introduction of ESSA in place of NCLB and the stress that teachers feel regarding standardized testing might have slightly less weight now than at the time of these studies, but there are certainly still a lot of accountabilities placed on teachers by administration in the ESSA era. Because of this, I believe this data is still relevant to consider even if the federal government might not force school systems to fire poor performing teachers anymore, since school systems are still held responsible and might choose to (or at least threaten to) fire poor performing teachers anyway.

This stress is greatly affecting the teachers that are available. There is a teacher shortage in lots of places around the country since it is not a very high paying job, and you do not normally work for ¼ of the year. A study in Georgia found that almost half of all teachers leave the profession after five years (Behizadeh, 2019). They cited the number of high-stakes tests as the top reason for dissatisfaction.

A point of view held by Au (2011) about the state of the American school is that it is similar to an assembly line where students are the raw materials that need to be transformed into goods, teachers are the workers that use the most efficient way to reach the standards required of the students. This point of view completely disregards the importance of creating good quality

products (students) for the cheapest solution, simplifying the human problem into an economic one. I think that this viewpoint is, unfortunately, not too far off from reality at most schools, because the incentives for teachers are to treat their class as an assembly line.

Even if you do not take an issue with the approach to teaching above, a real problem starts to occur when you realize that students are not done learning after just one year with just one teacher. They are put through assembly line after assembly line and splitting up the process like this causes problems for the development of students. A great example of this is the widespread change in strategy for teaching reading that occurred, which backfired.

The “three cueing” method for teaching students to read focuses on predicting the words that you are going to read using graphic, syntactic, and semantic cues. This was done in place of “phonics”, the traditional method where students learn to read by sounding out words (Hanford, 2019). A study in 1975 found out that worse readers are the ones that predict words based on context, not strong readers. Even though this was known that this strategy produces worse readers, it became widely taught in schools. The reason: it allows students who were learning to read to guess what the correct word is by looking at the starting letter and the picture that goes along with the sentence (Hanford, 2019). In a system where a teacher knows what words the students must know at the end of the year, and that they will be accompanied by pictures in the tests, why would they choose to teach the harder way, when they get better results using the “three cues method”? Teaching the “three cues” method helped the teachers at the time, but it prevents their students from learning how to read.

This is a major flaw with the school system as it is now, and it is due to NCLB and ESSA stressing teachers and either forcing them out of the profession or into strategies that might be good for them but are not good for their students. This is a clear misuse of the traditional power

that teachers have over students. The teachers, however, have a legal power higher than them, which is the government and the policies that it passes. If these are the policies that are passed by the party with power, then the teachers are going to end up doing what is incentivized to them, which is a disservice to the students. Therefore, I argue that this is in turn a misuse of the legal power given to policymakers.

This misuse of power is seen by the students in many ways. First, their education is not put first in the school system. They are told that the point of being at school is to learn, but they can see that is not the case. This leads to a distrust between students and the school system, leaving them to not care about their learning, since no one else does. This leads to students feeling like there is no point in being at school.

Conclusion

I have shown how national policies such as NCLB and ESSA impact students' perceptions of school. They do this by requiring standardized testing that greatly stresses students, since they tend to attribute excessive value to the grades that they receive and these standardized testing scores and it is not a very equitable way for students to show what they have learned. They also do this by incentivizing teachers to focus on teaching to the test even at the expense of student learning, which creates a reason for students to not want to learn.

Using Weber's theory of power, I believe that, ethically, the legal power given to policymakers, specifically regarding schools, must be used carefully to not further hurt students' journey through school. There is a lot of power present in these regulations that if not fully thought through, as we have discussed, can lead to unintended and harmful consequences.

I think that the standardized testing policies should limit the standardized tests allowed to be given by states only to the ones that are required federally. This will help prevent excess strain on students and teachers, since they will have fewer exams to worry about. I also think that states should be allowed to make multiple versions of assessments, where students can choose which type of assessment they want to participate in, so that they can show the understanding of the subject in ways that make more sense to them. For example, to test a student's ability to read, there could be an option for a standardized test where the students have to describe what was happening in what they read and there could be another option where students are given a start to a story that they have to read, then the students are able to write their own end to the story, allowing them to show their understanding of the text by their ability to sensible add to the story.

Future research should look into alternatives to standardized testing as we have currently in the United States to discover if other alternatives to ensuring that students are learning what they are supposed to in school could be more effective.

References

Allen, K. (2004). *Max Weber: A critical introduction*. Pluto Press.

Au, W. (2011). Teaching under the new Taylorism: High-stakes testing and the standardization of the 21st century curriculum. *Journal of Curriculum Studies*, 43(1), 25–45.

<https://doi.org/10.1080/00220272.2010.521261>

Behizadeh, N. (2019, February 15). *How to Improve American Schooling with Less High-Stakes Testing and More Investment in Teacher Development*. Scholars Strategy Network.

<https://scholars.org/contribution/how-improve-american-schooling-less-high-stakes-testing-and-more-investment-teacher>

Blad, E. (2025, January 31). Why Can't We Leave No Child Left Behind ... Behind? *Education Week*. <https://www.edweek.org/policy-politics/why-cant-we-leave-no-child-left-behind-behind/2025/01>

COE - High School Graduation Rates. (2024, May).

<https://nces.ed.gov/programs/coe/indicator/coi/high-school-graduation-rates>

Crocker, J., Luhtanen, R. K., Cooper, M. L., & Bouvrette, A. (2003). Contingencies of Self-Worth in College Students: Theory and Measurement. *Journal of Personality and Social Psychology*, 85(5), 894–908. <https://doi.org/10.1037/0022-3514.85.5.894>

Effects of Standardized Testing on Students & Teachers / American University. (2020, July 2). <https://soeonline.american.edu/blog/effects-of-standardized-testing/>

Every Student Succeeds Act (ESSA) | U.S. Department of Education. (n.d.). Retrieved April 21, 2025, from <http://www.ed.gov/laws-and-policy/laws-preschool-grade-12-education/every-student-succeeds-act-essa>

Franklin, C. A., & Snow-Gerono, J. L. (2007). Perceptions of Teaching in an Environment of Standardized Testing: Voices from the Field. *The Researcher*, 11(2).

Hanford, E. (2019, February 22). *How a flawed idea is teaching millions of kids to be poor readers.* <https://www.apmreports.org/episode/2019/08/22/whats-wrong-how-schools-teach-reading>

Jones, L. (n.d.). *The difference between the Every Student Succeeds Act and No Child Left Behind.* Understood. Retrieved April 21, 2025, from <https://www.understood.org/en/articles/the-difference-between-the-every-student-succeeds-act-and-no-child-left-behind>

Modan, N. (2023, October 23). *DOD students spend more time on standardized tests, GAO finds / K-12 Dive.* <https://www.k12dive.com/news/dod-students-standardized-tests/697458/>

NAEP Reading: National Achievement-Level Results. (n.d.). Retrieved April 21, 2025, from https://www.nationsreportcard.gov/reading_2017/nation/achievement/?grade=4

NAEP Reading: Reading Results. (n.d.). Retrieved April 21, 2025, from https://www.nationsreportcard.gov/reports/reading/2024/g4_8/?grade=4

Rose, D. (2000). Universal Design for Learning. *Journal of Special Education Technology*, 15(4), 47–51. <https://doi.org/10.1177/016264340001500407>

THE BUSH RECORD - FACT SHEET: No Child Left Behind Has Raised Expectations and Improved Results. (n.d.). Retrieved April 21, 2025, from <https://georgewbush-whitehouse.archives.gov/infocus/bushrecord/factsheets/No-Child-Left-Behind.html>

Torok, L. (2024, February 8). *Six things adolescents need from their communities to face the epidemic of depression and suicide.* Crisis Text Line.

<https://www.crisistextline.org/blog/2024/02/08/six-things-adolescents-need/>

WILLIAM, D. (2010). Standardized Testing and School Accountability. *Educational Psychologist*, 45(2), 107–122. <https://doi.org/10.1080/00461521003703060>

Winkler, D. A. (2022). Reframing How Grading Affects and Shapes Students' Self-Worth in Christian Higher Education. *Christian Higher Education*, 21(4), 264–280.

<https://doi.org/10.1080/15363759.2021.1978904>