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The Impact of Standardized Testing

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Wicked Problems Research Project

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Abstract:

This paper will discuss the issues revolving around standardized testing and the detrimental effects it has on student's mental health and testing anxiety. This will also show how it can limit and hinder the students long term learning in the future with standardized and high-stakes testing. It will also show how changes could be made in school systems to help better their students and their learning. The focus is on Pennsylvania testing due to the amount of standardized testing they provide their students.

Key Words:

Standardized Testing, Anxiety, Classroom Environment, Effects on Students, Mental Health,
High-Stakes Testing

Wicked problems are complex and unanswerable issues in the world where there is no correct or wrong way to handle it. Although, we must try our best to pose ideas and solutions to the wicked problems around us to help solve them. The one that seems to be pressing to our world today would be the effects of standardized testing on students varying in age and grade levels. This a complex and interconnected problem separated by each county, state, and country. Children, teenagers, and young adults are directly affected in harmful ways due to standardized and high-stakes testing and the long-term effects it has on students throughout their educational career. High-stake testing: not stated standardized testing in most but they are considered high stakes in Pennsylvania, such as, the PSSAs, Keystones, SATs, and ACTs.

The definitions of testing from the Education Reform defines standardized testing as,

A standardized test is any form of test that requires all test takers to answer the same questions, or a selection of questions from common bank of questions, in the same way, and that is scored in a 'standard' or consistent manner, which makes it possible to compare the relative performance of individual students or groups of students. While different types of tests and assessments may be 'standardized' in this way, the term is primarily associated with large-scale tests administered to large populations of students.

(Education Reform, First Paragraph)

This means that no matter the school district and what they have covered, there could be material and concepts that the students have no idea about. There is another type of testing that students will encounter, and The Education Reform defines achievement testing as,

Achievement tests are designed to measure the knowledge and skills students learned in school or to determine the academic progress they have made over a period of time. The

tests may also be used to evaluate the effectiveness of a schools and teachers or identify the appropriate academic placement for a student—i.e., what courses or programs may be deemed most suitable, or what forms of academic support they may need. Achievement tests are “backward-looking” in that they measure how well students have learned what they were expected to learn. (Education Reform, Second Paragraph)

The PSSA’s (The Pennsylvania System of School Assessment) are standardized tests administered in public schools in the state of Pennsylvania. The assessment is taken in the classroom with the primary teacher of that class being the administrator. The grades the PSSAs reach are 3rd-8th; the students are assessed in English language arts skills and mathematics. It is also imperative that the teachers keep everything confidential while working with the students and that no information is shared between the students. The Keystone exams are given at the end of the year and based on the grade assessments. They are used to show proficiency in multiple subject areas. The subject areas of the Keystones are Algebra I and II, Geometry, Literature, English Composition, Biology, Chemistry, U.S. and World History, and Civics and Government. Some subject areas could be skipped depending on the school. The Keystones are used to see how the curriculum is run in each school district and must be passed. SATs (Scholastic Aptitude Test) are a standardized assessment which is widely used for college admissions in the United States. Typically, this is taken during the Junior and Senior year of high school for students. Most colleges use this to determine if students’ scores are qualified enough to be accepted. In particular, Pennsylvania has a more rigorous curriculum program for their students. Majority of standardized tests can determine a student’s future, rather than show what they can accomplish and continue to learn. Student’s futures are being based on an exam in which materials might not have been taught to them and it does not show their strengths and what they can do. The tests are

also given in unfamiliar environments which can cause anxiety for students which would affect them taking their exams.

Standardized testing continually affects school districts and its students with equity vs. equality. The Milken Institute School of Public Health defines this argument as states: “equality means each individual or group of people is given the same resources or opportunities as everyone else around them. Equity recognizes that each person has different circumstances and allocates the exact resources and opportunities needed to reach an equal outcome,” (Milken Institute School of Public Health, 2nd paragraph) Following this, many schools and their curriculums will focus on the equality aspect of this argument. This means not every school or student will have the same curriculum throughout their subject areas, such as math, English, literature, and reading. It also means that students will not be given the tools they need to succeed, and only what the school district determines equal. Students will not learn the same skills across school districts, and this is directly related to student’s standardized testing scores. Not all students come out knowing a lot of material when transitioning throughout their educational career or career paths. Equity vs. equality affects low-income districts and higher funded school districts in terms of what can be taught, the equality of the school and the resources provided for school use. Paula Dressel, Ph. D, from the Race Matters Institute states: “The route to achieving equity will not be accomplished through treating everyone equally. It will be achieved by treating everyone justly according to their circumstances,” (Dressel, 9th Paragraph). This is important to understand because every student and individual is different and must be provided the necessary help to help them succeed in anything they are doing, not just for testing purposes.

Students and children with disabilities are also affected by standardized and high-stakes testing. In Pennsylvania specifically the tests are the PSSA's, Keystone's, and other optional testing for college, but almost always needed SAT's. An example of this would be for students with intellectual disabilities and if these tests should still be mandatory for them. This is being questioned due to these students already going through multiple progress monitoring, placements, and IQ tests for their IEP's (Individualized Education Program). IEPs are legal documents created and made by a team for the student. The IEP is then given to each teacher to help map out the goals, strengths, weaknesses, and scores of the testing for the specific student to help provide accommodations. Even with accommodations such as, extended time, a quiet space, a translator, or for any other accommodation for the student taking standardized and high-stakes testing it will still cause immense stress and strain on the student if they have not gotten to the material. Leslie Johnson, a special education teacher at Swainsboro High School, states in her article *First Do No Harm- An Argument Against Mandatory High-Stakes Testing for Students with Intellectual Disabilities*, "Primum non nocere' or 'First, do no harm,' is traditionally associated with the Hippocratic oath that medical doctors take," (Johnson, Volume 43, Issue 4, 1st Paragraph). The first premise of this quote is do no harm because there should be no harm done in pursuit of a goal. This affects students with intellectual disabilities because it causes them more harm and unease when working towards their goals in their IEPs and taking these tests rather than achievement testing. Achievement testing could be used to help show how the students are meeting their goals which is based on what they already have learned and know.

'Standardization and UNDERSTANDARDization in Educational Assessment' is an article written by Stephen G. Sireci that touches upon the fairness and level playing field of standardized testing. Sireci states that:

Educational tests are standardized so that all examinees are tested on the same material, under the same testing conditions, and with the same scoring protocols. This uniformity is designed to provide a level "playing field" for all examinees so that the test is "the same" for everyone. Thus, standardization is designed to promote fairness in testing. In practice, the material tested, the conditions under which a test is administered, and the scoring processes, are often too rigid to provide the intended level playing field.

This relates back to the equity vs. equality argument in schools, there are so many factors when dealing with the even playing field as Sireci calls it. The environment the testing takes place in can affect the student, experiences play a role, disabilities, and more. Standardized testing is used to show what is understood and not entirely learned by the students. It only provides data without considering the personal aspect of testing on students.

High-stakes and standardized testing also can change and alter the dynamic of the classroom community that was established in the beginning of the school year by the teacher and students. This community aspect can be seen in the trust, honesty, respect, and expectations built by the students and the teachers throughout the beginning of the year. Once bringing up standardized and high stakes testing can result in shattering the community established in the classroom specifically observed by teachers in a study done by Deborah Landry. This study is from the article *Teachers' (K-5) Perceptions of student behaviors During Standardized Testing*. The community dynamic can be crushed and this is because of the differences the types of testing take on and has students working independently and alone, without much guidance from the teachers. This can ruin the trust factor of asking questions and to have students wanting to ask questions because the teacher cannot help or provide guidance to the students. This study by Deborah Landry was conducted with 63 teachers in grades kindergarten through fifth grade from

two northeastern Oklahoma elementary school districts, and from a local university affiliate of a national writing project. The data was collected from an online survey, with four individual interviews. The four individuals were two teachers from a suburban school district, and the other two were from an urban school district. The information on the online survey were open-ended comments, teacher interviews, field notes of research, and lived experience of researcher as a teacher. Landry states that:

The goal of this study was to provide professionals in the field of education a teacher's report of children's behavior during tests and the test anxiety experienced by children. Viewing these changes in behavior and considering the effects upon self-concept may result in providing insight into the need for alternative methods of testing children... As students' lives become more and more affected by their test scores, it is critical that test anxiety and behavior changes in children be explored and documented. (32)

This study shows the effects of standardized and high stakes testing through the eyes of educators and how they notice their classroom dynamic change. The perceptions of students during standardized testing were conducted by the teachers in the school district to examine the effects of standardized testing on student behavior as perceived by their teachers in younger grades specifically 3rd-5th grade. It was found teachers saw drastic changes in student behavior during testing, and the classroom physical environment changes during testing. Future research hints at that it will include the impact of teacher memories of testing on students, classroom environment and student anxiety during testing. Teachers could help plan their lessons to match what happened years before to help prevent more anxiety than before in students. This also affects teachers and how they must conduct themselves throughout the testing.

A study conducted by Robert L. Linn is on the pendulums and controversies in the centuries of standardized testing. This was done to help bring awareness of the growing controversial reign over standardized testing in the United States and throughout the 20th century. It shows high expectations in students of all ages across the board to cause stress in individuals in education regardless of being a student or teacher. Linn states that:

Predictions about the future are always risky. It is not at all clear how issues surrounding testing in any of its myriad forms and uses will play out in the first part of the 21st century. The questions and controversies related to the uses of tests for grade-to-grade promotion and college admissions do not seem to be near a point of resolution. One of the lessons from a look back at these two uses, however, is that any resolution is apt to be only temporary. It is safer to predict that the pendulum will continue to swing with the ebb and flow of controversies about these uses of tests than it is to predict either the timing or the details of temporary periods of stability. Perhaps safest of all is the prediction that there will continue to be public controversy of testing. (36).

Linn explains the swing of how things are handled in the classroom depending how it will fall over the years. Meaning that there is always going to be pendulum swings in the teaching world meaning new faces coming in and old faces leaving as the years go by. There will also be more controversies surrounding standardized testing, and the only way to stay ahead is to keep coming up with more solutions and new and innovative ways to help students and schools.

In these testing situations there was a study done by multiple authors; Sean Mulvenon, Charles E. Stegman, and Gary Ritter all from the College of Education and Health Professions University of Arkansas. They have conducted studies on the heightened anxiety among elementary students and their responses from taking high-stakes testing. This study was done on

Grade 3 to Grade 5 students. The study shows elementary school students that were once told about standardized testing and high-stake tests which then have caused test anxiety in the students. This is the first study to directly examine differences in young students' reported test anxiety between No Child Left Behind (NCLB) which is a part of the Individuals with Disabilities Education Act. NCLB sets high standards and accountability for student achievement to make sure that all children are caught up to 21st century learning. Achievement testing and classroom testing which also relates to special education as well. The students reported significantly more overall test anxiety with high stakes testing, compared to classroom testing on anxiety. Teachers, principals, counselors, students, and parents all observed this. They got to see different students results depending on if they knew the weight of the exam compared to not knowing. This has shown that students will feel pressured when taking these tests and knowing how high-stakes they can cause them to have long term testing anxiety knowing their worth is based on a grade rather than what they are capable of. This can be changed by having different ways of introducing testing to the students at a younger age to help stop the fear of these high-stakes testing. Another option would be to take away standardized testing and create a test based upon the school's specific curriculum.

In an experiment done by Louise Beuchert, Tine Louise Mundbjerg Erikson, and Morten Visby Krægpøth they show how standardized testing feedback in math helps and impacts students. They state how they performed their experiment as:

We use a regression discontinuity design to estimate how later outcomes of children scoring just below or above the threshold separating two grades are affected. Our results demonstrate that providing information to parents about their child's educational performance in math in third grade can improve their future educational outcomes, regardless of the child's ability level. We

also investigate subjective well-being measures, such as academic confidence and intrinsic motivation, and find no evidence that low-performing students are particularly sensitive to negative feedback from tests. (Beuchert, Eriksen, Krægpøth, Abstract)

This shows that many students are not sensitive to negative feedback on their tests, but is sensitive the only thing we can go on? Students can benefit from constructive criticism to learn errors in something they are learning, but this then requires them to be taught again so they can benefit and do it correctly. If students only receive feedback with no change or assistance, the student will continue to make the same mistake because they do not know otherwise. Having parents or guardians involved in the student's learning is imperative to helping students find a consistency of schooling and having the same expectations in both environments. While this is not always the case, some parents have language barriers, or simply do not find school important, filling the parents in of the child's mistakes on their testing might not change anything. Schools need to make sure to review material after all types of testing to help fix mistakes from before to help master the skill before moving on to something more complex. If the students do not master a skill, they will continue to struggle throughout their schooling career. After taking standardized tests students are only give their scores and they cannot see where they made errors leaving them without a clue to what they could ask for help on or get clarity on. There needs to be a change if standardized testing cannot be filtered out of school districts that there has to be a way to see each problem and have teachers be able to review and set aside time to answer questions for the children.

In Costa Rica, there is a school called Casa Sula. The representative that helps run this facility is Marcelo Valansi. There is no classrooms or blackboards in Casa Sula and the students do not take tests or have any type of homework. Their philosophy is to question and challenge

old ideas to help create new ideas for the future. The children are taught to create their own destiny and to shape their own learning through different methods that come natural to them. They teach themselves math, languages, and life skills such as trades. The kids can walk and go on expeditions and collect materials that they use in their projects. Even though there are adults helping along the way to have things organized and ready for the students, they keep the learning independent for the child to grow and become engaged in their learning. In this specific school they have seen much more developed learning, engaged and excited learning, and a wide range of learning. Showing this, the students' temperament without the pressure of standardized testing that they are happier and more willing to learn. They also are not discouraged to fail because they are guiding themselves and not having a school district guiding them.

After looking at all of these issues pertaining to standardized and high-stakes testing is that it is clearly detrimental to students for their long-term learning and can hinder their learning as well. A way to help curb this wicked problem would be to find a way to switch from standardized testing to achievement testing so that no matter what the school covers at least it would be on the test and allow for a fair assessment for all students.. Although, this could cut down on costs for funding the standardized testing for the school district and would not rely on them determining the school districts worth. This would help lower income school districts to not be funded solely on testing scores but instead show their students' knowledge based on their curriculum. It also could help on funds by not having teachers taking certification courses to be able to give standardized testing. Although this is a wicked problem across many schools and students, we can work towards creating a better testing to help show students' knowledge and can create a better atmosphere around testing. Children should be based on their capabilities and

what they can do, compared to what the world thinks they should know. The students need to come out of school knowing more than their teachers, not on the same levels of the teachers.

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