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Students' Attitudes Towards Standardized Testing: A Literature Review

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Students' Attitudes Towards Standardized Testing: A Literature Review

An Honors Thesis submitted in partial fulfillment of the requirements of Honor Studies in
Childhood Education

By

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Abstract

Standardized testing is a task that all students must undertake during their educational careers. Standardized tests are large determinants to course placements, exceptionality placements, grades, school sanctions or rewards, and education policy. It is imperative that all students have an equal opportunity to succeed on standardized tests. However, bias, stress, and anxiety in standardized testing often hinders the opportunity for many students to excel on the tests.

The purpose of this literature review is to discuss the research conducted on standardized testing bias which includes the prevalence of testing bias as well as the causes and types of testing bias. Testing bias can be caused by a large variety of factors such as socioeconomic status, language spoken, prior knowledge, students' experiences, and home "culture." Testing bias can be categorized as economic bias, gender bias, or racial bias. Students' attitudes towards testing is also be explored. The literature review seeks to focus on students' view of standardized testing and how they can be given a voice to share those views in school.

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Section I: Introduction

A test is being given to students in a second-grade classroom. The test is a vocabulary identification test where there are various pictures and multiple-choice answers under them of what each picture is called. On this particular test, there was a picture of a chicken leg. The multiple-choice answers were a bat, a drumstick, a flower, and a marker. A child who is an English Language Learning (ELL) student is struggling to answer this question because he knows the picture is depicting a chicken leg but does not see that as an option. What is the correct answer? He ends up getting the answer wrong because he doesn't know that in English a chicken leg is also called a drumstick.

Significance of Study

The impact of standardized testing is frequently discussed in terms of how it affects teaching and learning (Simpson, 2016). Testing is often cited as contributing to a narrowing of the curriculum and as resulting in inappropriate test preparation practices (Jerald, 2006; Koretz, 2005). Teachers often express concerns that students are spending too much time on testing and preparing for testing and report concerns about the amount of time students spend on testing-related activities that results in lost instructional time (Simpson, 2016). Many educators, parents, and students perceive testing as being stressful and often express concerns on the impact of testing on students' physical and emotional well-being, engagement in school, and self-efficacy (Simpson, 2016). Cheating scandals, such as the ones in Atlanta and Washington, D.C., have been widely publicized as well (Wong & Ross, 2015). While there is so much controversy over standardized testing, it is important to research how some students can be put at a disadvantage while taking these tests.

Background

Equal opportunities in the classroom is crucial (Cummins, Brown, & Sayers, 2007). As classrooms are becoming more and more diverse, testing bias is becoming a bigger and bigger issue (Cummins, et al., 2007). Diversity should be celebrated and attended to. All students should have equal opportunities to get an exceptional score on a test and to succeed. All students should have equal opportunities to show everything they know and everything they excel in. However, it has been difficult to combat this issue in the education system (Washington, 2001). Non-standardized assessment approaches are gaining acceptance but are still used much less frequently than standardized measures (Washington, 2001).

Testing bias can stem from a student's home "culture," language used at home (also can be referred to as a child's first language), and the child's linguistic abilities (Washington, 2001). Cultural bias by the teacher, cultural dialect, and socio-economic status are also major influences in bias (Obiakor, 1999; Entwisle & Alexander, 1988; Rist, 1970/2000). Oftentimes, research focused on testing bias suggests that it has its most profound effect on reading and writing tests (Washington, 2001). However, testing bias can affect assessments in every subject including science, math, social studies, and, of course, reading and writing (Washington, 2001).

Testing and assessments play a major role in most students' educational careers as most students in the public-school system take state-mandated standardized tests. These tests serve as an overall academic assessment of the student, teachers, school district, and curriculum (Simpson, 2016). Students appear to understand the consequences associated with standardized testing for their schools, teachers, and administrators and often feel pressure to perform well, likely as a result of the perceived importance and high-stakes nature of standardized testing (Dutro & Selland, 2012; Harlen & Deakin Crick, 2003). There is a lot of emphasis placed on

these tests for these students and a lot is dependent on the scores students receive on them (Simpson, 2016). Testing bias gives a major disadvantage to minorities and ELL students who struggle with the basic concepts of understanding what the test is asking them (Washington, 2001). Students will not be able to succeed on standardized tests if they cannot perform well on these assessments due to testing bias, stress, or anxiety.

Primary Research Focus

This literature review is going to include extensive research into the causes of bias and types of bias in standardized testing. The primary research focus is students' view of standardized testing and how they can be given a voice to share those views in school.

Section II: Review of Literature

Dr. Julie A. Washington, chairman and professor in the department of Communication Sciences and Disorders at Georgia State University, researches the cultural dialect use of African-American children with a specific emphasis on the impact of dialect on language assessment, literacy attainment, and academic performance (Georgia State University, 2020). According to her, the majority of research accepts that there is considerable testing bias in assessment—and especially in standardized testing (Washington, 2001). Researchers attribute the reason for testing bias to many different things (Washington, 2001). It seems there is not a clear consensus on what the one main cause of testing bias is—or if there is one main cause—and how it can be solved. Though research does show that testing bias can be caused by a variety of different things, testing bias can have major and impactful implications for students. The current knowledge of performance on cognitive, linguistic, and literacy tests highlights the importance of the influence of prior knowledge, experience, and home “culture” on test performance (Washington, 2001).

The Causes of Testing Bias

Every student in every classroom is different. Their culture, background, and home-life are all different from each other. Testing bias can be caused by an abundance of all of these differences. Research has shown that the majority of testing bias stems from differences in language and literacy skills (Washington, 2001). This can be a variety or combination of many different things. It cannot be concluded that this is the one main cause due to the differences of all of the students and all of their situations. The three main factors, according to Dr. Washington, that affect testing bias, stress, and anxiety are differences in language skills that can be attributed to general oral language skills or dialect variation, home literacy experiences, and the impact of poverty and teacher expectations (Washington, 2001).

Language differences attribute greatly to testing bias, stress, and anxiety. The importance of language skills to reading is well established (Catts, Fey, Zhang, & Tomblin, 1999; NCES, 2000; Snow, 1983; Vellutino, 1998). Phonological awareness skills, in particular, have received a great deal of attention, and have been found to be critically important to the process of becoming an able reader (Torgesen, 1998; Badian et al., 1990; Vellutino, Scalon, & Tazman, 1998). These studies have demonstrated that children who have difficulty with phonemic awareness are at great risk for reading disabilities (Torgesen, 1998; Badian et al., 1990; Vellutino, Scalon, & Tazman, 1998). Strong oral vocabulary skills, both expressive and receptive, also have been identified repeatedly as critical for both reading and general academic success (Washington, 2001). Vocabulary, such as sight words and print vocabulary, supports reading development, and as children get older reading is an important source of vocabulary growth (Fielding, Wilson, & Anderson, 1984). If a child has difficulty with any of these skills, their reading level will be low which will potentially cause them to struggle with most

standardized tests. Depth of word knowledge, which also can hinder students' ability to do well on standardized tests, includes knowledge of multiple word meanings, contextual constraints on word usage, and relational vocabulary knowledge (Carlisle, Fleming, & Gudbrandsen, 2000; Beck & McKeown, 1991). Acquiring deep knowledge of word meanings has been identified as an area of vocabulary growth that may increasingly influence a child's academic success as he or she gets older (Carlisle, Fleming, & Gudbrandsen, 2000). Without this knowledge, children may have difficulty grasping academic content and academic language used on standardized tests (Carlisle, Fleming, & Gudbrandsen, 2000). Vocabulary and phonetic awareness are clearly crucial in developing children's ability in reading skills--unfortunately all children do not have the necessary (high) level to use these skills on standardized tests. This causes bias within testing if students are struggling with any of these skills as it causes students to have a hard time understanding what the test is conveying or asking them to do.

Dialect variation is also a major factor in causing testing bias (Washington, 2001). Most of the research on this factor has been done on African-American children (Washington, 2001). Because many African-American children hear different dialects at home than they hear at school, dialect variation is a dominant issue for many of these students (Washington, 2001). Most African-American English (AAE) Dialect is used at the time of school entry (Washington, 2001). Children as young as four years of age display a wide variety of dialect forms in their spontaneous language (Washington, 1994). African-American English is a systematic, rule-governed cultural dialect that impacts nearly every speech and language domain, including morphology, syntax, phonology, and pragmatics (Washington, 2001). The impact of this has been an ongoing debate for many years. With younger African-American children just entering preschool or kindergarten the mismatch between the language forms and use of language at their

homes and that of the classroom are suspected to significantly influence their transition into school (LeMoine, 2001). The more the child's home language resembles the language of the school, the easier this transition is expected to be. Conversely, the more the child's linguistic system diverges from Standard Classroom English (SCE), the more difficult his or her transition will be. Children who have different dialects than the one used on standardized testing may find the test difficult to understand.

Home literacy experiences also affect a child and their academic skills. When children have little home literacy experiences, there is a mismatch between home and school expectations. Race, ethnicity, poverty and education together have significant correlation with the promotion of literacy (Handel, 1999). Children are more likely to be read to if their mothers have higher levels of education and if they come from a two-parent household (Washington, 2001). White children are more likely to be read to every day than Latino or African-American children, and less than half of children in poverty are read to every day compared to 61 percent of children above the poverty line (Forum on Child and Family Statistics, 1999). Children who have less experience with books will not be as good of readers compared to children who have more experience with books (Washington, 2001). Low home literacy experience will also lead to less self-interest in reading. Differences in exposure to print extend, not only to the amount of exposure, but also to the type of exposure (Washington, 2001). African-American children reported that the primary form of environment print are signs, labels, and store coupons, rather than traditional sources such as story or picture books (Purcell-Gates, 1996). While this kind of literacy does not lack value, it is quite different from the form that literacy in the school, contributing to the difficulty these children might face making the transition to a more mainstream classroom environment. These differences in home literacy practices, and the

difficulty that African-American children, minority children, and children in poverty often face in their transition to the school culture, highlight the importance of establishing a connection between the home or community in which a child lives and the school the child attends (Washington, 2016). The connection should be bidirectional, such that the school is influenced by home practice as well as the home being influenced by school-based practice, developing what Scott and Marcus (2001) have called “cultural synchronization” between the young child’s home environment and the school (Washington, 2001). The empathy and understanding that this creates between the home and school cannot be overstated and is important to bridge in order for all students to be successful.

Teacher expectations are influenced by different variables. Specifically, cultural bias by the teacher, cultural dialect used by the child, and low socioeconomic status of the child have been frequently noted as variables that significantly influence expectations for children (Obiakor, 1999; Entwisle et al., 1988; Rist, 1970/2000). In a landmark ethnographic longitudinal study of teacher expectations, Rist (1970/2000) observed the behavior of classroom teachers toward a group of low- and middle-income African-American students. Starting in kindergarten, the low-income children were called on less frequently, received less positive feedback and interaction with the teacher, and were provided less direct instructional time than were their middle-income peers, despite their enthusiasm and motivation. The low expectations of teachers continued into subsequent grades for many of these low-income children, and most were not as successful academically as their middle-income peers (Rist 1970/200). Rist (1970/2000) referred to this outcome as a “self-fulfilling prophecy” for these children. In other investigations researchers Chall, Jacobs, & Baldwin, (1990) and Entwisle et al. (1988), found that a teacher’s expectations for his or her African-American students affected the extent to which the students were

challenged, called upon in class, and pressed for answers. African-American children for whom teachers expressed high expectations performed better when learning to read and general classroom performance was improved (Washington, 2001). Teacher expectations plays a major role in creating equal opportunities for all students.

Types of Bias

In 2019, there were new lawsuits demanding that the University of California system eliminate the requirement that students take the SAT or ACT to be considered for admission. “The lawsuit, filed on behalf of the Compton Unified School District, four students and six community organizations claim that the tests are biased and don’t predict a students’ potential success” (Elesser, 2019, pg. 1). The lawsuit argued that using the tests violated the state’s antidiscrimination statute because it disadvantages children of color, children from low-income families, and children with disabilities (Elesser, 2019). The lawsuit argues that race, economic, and gender bias are the cause of the disadvantages. Elesser explains the economic and racial bias found in the SAT:

“With regard to race, in 2018, combined SAT scores for Asian and White students averaged over 1100, while all other groups averaged below 1000. With regard to income, a 2015 analysis found that students with family income less than \$20,000 scored lowest on the test, and those with family income above \$200,000 scored highest. And we’re not talking about just a couple of points. The average reading score for those students whose family income is below \$20,000 is 433, but the average for those with income of above \$200,000 is 570. Clearly, there is disadvantage. The disadvantage is typically attributed to test preparation. There is substantial evidence that test prep can raise test scores, and even the College Board who administers the SAT test admits there are benefits associated

with test prep. But high-quality test prep can be expensive, and many can't afford the fees associated with these tutoring classes. Beyond test preparation, high income students often have access to educational opportunities not available to low income students" (Elesser, 2019, pg. 2)

Racial bias also comes into play as students are often reminded of their racial group before taking a test during the "questionnaire" portion of a standardized test (Elesser, 2019). More differences in test scores may also be attributed to stereotype threat (Elesser, 2019). Stereotypes, like those that suggest certain racial groups are better at math than others, raise self-doubts and increase anxiety during high-pressure exams and result in worse scores for those who are negatively stereotyped (Elesser, 2019). Inversely, those with more positive stereotypes result in better scores.

Gender bias and disparity has been blamed on several factors. Females tend to be at a disadvantage on standardized tests more than males. Females tend to underperform males in math and science sections of standardized tests (Elesser, 2016/2019). Stereotype threat is likely to play a role as women are negatively stereotyped in math. There is also evidence that passages in tests may remind test-takers of the negative stereotypes (Elesser, 2019; Balart and Oosterveen, 2019; Hartcollins, 2016; & Elesser, 2016).

"One math question asked the students to examine a chart that showed more boys than girls in math classes. In the verbal section, students were asked to analyze a 19th century argument that a woman's place was in the home" (Elesser, 2016, pg. 2).

On the surface, these questions may not seem like a serious issue; however, they are likely to trigger stereotype threat (Elesser, 2016). "Reminding the stereotyped group of the stereotypes can increase their anxiety making their test score worse" (Elesser, 2019, pg. 3). Another study,

conducted by Balart and Ooversteen (2019), found evidence that a longer test would help reduce the gender gap as enhanced spatial abilities in boys and men give boys a time advantage on the test (Elessor, 2019; Balart and Ooversteen, 2019).

Student's Feelings Towards Testing

Students may not be aware of the prevalence of standardized test bias; however, students are aware of how they feel during testing. Test anxiety and stress can be an upsetting and a disruptive factor for students (Rana & Mahmood, 2010). There has been much research done on the effects of test stress/anxiety on standardized testing achievement (Rana & Mahmood, 2010). There are number of researches reporting text anxiety as one of the major causes for students' underachievement and low performances on standardized testing (Oludipe, 2009) and has been shown to affect students' ability to profit from instruction (Schonwetler, 1995). There have been numerous studies done on this paradox (Rana & Mahmood, 2010; Gaudry and Spielberger, 1971; Nicholson, 2009; Hasan, 2009, and Chapell, et al., 2005) and Rana and Mahmood (2010) summed up the inverse relationship between test anxiety and students' achievement research that has been conducted:

“Gaudry and Spielberger (1971) discussed that high test anxiety is considered as one of the main factor[s] for low performance of students at university level [standardized testing]. A study conducted by Nicholson (2009)...[explored] the effects of test anxiety on student achievement of grade 11 students...[revealing] that anxiety and achievement are related to each other. Khalid and Hasan (2009) conducted a study on a purposively selected sample of 187 undergraduate students to explore the relationship between test anxiety and academic achievement and found that students with academic achievement have low test anxiety scores and vice versa. Chapell, Blanding, Takahashi, Silverstein,

Newman, Gubi, and McCann (2005) conducted a research study to explore the relationship between test anxiety and academic performance. They collected data from a large sample of graduate and undergraduate students and found a significant and negative relationship between test anxiety and academic achievement” (Rana and Mahmood, 2010, pg 64).

In February 2019, Heissel of the Naval Postgraduate School, Adam and Figlio of Northwestern, and Doleac and Meer of Texas A&M University studied “Test and Stress Bias.” Their research was focused on the effects that high-stakes standardized testing had on human cortisol levels, a hormone associated with stress (Tatter, 2019). In a New Orleans school district, they compared the cortisol levels in students’ spit during weeks with high-stakes standardized tests — those that have implications for course placement, school sanctions or rewards, or education policy — and weeks without testing (Tatter, 2019). They found that, “on average, students had 15 percent more cortisol in their systems [in] the homeroom period before a standardized test than on days with no high-stakes testing. Students who showed the largest variations in cortisol between testing and non-testing weeks tended to perform worse on tests than expected given their classwork and performance on non-high-stakes tests, among other measures. Cortisol spikes weren’t the only culprit; some students’ cortisol dropped on testing days, which was also associated with lower performance” (Tatter, 2019, pg. 1). Ultimately, they found that students who come from more stressful neighborhoods, with lower incomes and more incidents of violence, were most affected (Tatter, 2019). This means that standardized test scores for these students are the least valid measures of what they actually know. While students from minority groups and lower income students may encounter bias more frequently, it is possible that bias, stress, and anxiety can affect all students.

Another study was conducted on “The Relationship between Students’ Test Anxiety and Academic Achievement.” This study was conducted in 2010 by Rizwan Akram Rana and Nasir Mahmood of the University of Punjab. “A sample of 414 students was randomly selected from seven different science departments in a public sector university in Lahore, Pakistan. Data [were] collected by using the Test Anxiety Inventory (TAI) developed by Spielberger” (Rana & Mahmood, 2010, pg. 66). Rana and Mahmood found that there was a significant relationship between test anxiety scores and students’ achievement scores. “Results showed that a cognitive factor (worry) contributes more in test anxiety than affective factors (emotional).” (Rana & Mahmood, 2010, pg. 68). Therefore, it could be concluded that test anxiety is one of the factors which are responsible for students’ underachievement and low performance, but it can be managed by appropriate training of students in dealing with factors causing test anxiety (Rana & Mahmood, 2010). Rana and Mahmood also studied the comparison between genders in the different departments (subjects) of mathematics, physics, statistics, geology, zoology, and environmental science. There were slight differences between worry and anxiety with males and females with math, physics, and statistics. However, there were significant differences in worry and anxiety in geology and environmental science--both of which females had much more worry or anxiety than males. There was no data for males in zoology so scores could not be compared. According to this study, test scores, especially females’, can be an inaccurate measurement of knowledge or ability based on the overwhelming feeling of worry and anxiety that students can feel. This hinders students from high performing and high achieving test scores.

From these various studies, it is clear that students experience high stress and high anxiety during standardized testing—both shown with students’ cortisol levels and students’ self-

reports of worry and anxiety. This can cause low performance on standardized testing which can have many implications for the students.

Giving Students a Voice

Students are the ones taking the standardized tests—not the policymakers, lawmakers, administrators, teachers, or parents. Students are the one who are most affected by the scores they receive on these tests. Students, just as much as lawmakers and policymakers, want to succeed and excel in school and on standardized tests. Students need to be able to tell lawmakers and policymakers the changes that need to be made. When students are given a voice, they can be the advocates for themselves. They will encourage change to standardized tests that will take out bias. They will be able to explain the issues they see on tests. They just need an opportunity to share their feelings and concerns.

School, in most ways, is out of the students' hands. Students have to do many different things to succeed in school: learn to respect procedures and expectations set by their teacher or school, follow routines, and follow guidelines set by the school district. Students are expected to follow a lesson plan or curriculum formatted and written by distant policymakers (Shafer, 2016). On the walls, there are posters that the students didn't pick out or make that inform him/her of the school's goals and values (Shafer, 2016). Students are expected to excel on standardized tests made by state legislators who have never been to the students' schools or classrooms. According to Brion-Meisels (2016), who is a faculty member at the Harvard Graduate School of Education, this is not okay and needs to change immediately. She explains that "when schools find ways to welcome student opinions [and allow students to have a voice]--to partner with students as stakeholders in their own learning...they do more than equip students with tools for lifelong success. They also wind up creating programs and policies that are more effective at meeting the

schools' own goals for supporting young people in their healthy development" (Shafer, 2016, pg. 1). This will require educators, administrators, and legislators being willing to listen, share authority, and generate goals together (Shafer, 2016). Brion-Meisels says, "it means recognizing that young people have a perspective on the world that adults can't share, and that their perspective should be welcomed alongside the wisdom that adult perspectives bring" (Shafer, 2016, pg. 1). Students have the perspective on the standardized testing that the adults cannot have. Students know where they experience the most worry and feel most stress. Students know what needs to be changed. In Shafer's 2016 article, Brion-Meisels offers five ways schools can integrate student voices:

- "1. Regularly solicit student feedback. Educators can use surveys and other research methods to routinely gather data or ask students what's happening in the hallways and bathrooms, how they feel about the content and structure of classes, and for suggestions on school policies, culture, and climate.
2. Engage students in studying and assessing their school. Beyond asking for feedback on questions created by adults, schools can train students in collecting and analyzing data [on their own]. These youth researchers can then create their own research questions and use observations and feedback from peers to draw conclusions about what's going right, what could be improved, and how to help.
3. Include authentic student representation on leadership teams. Principals should leave space for students on school leadership teams, improvement teams, or equity and diversity teams. In meetings, participants should treat students as full members of the team, not just observers.

4. Invite students to any discussion related to their own learning. Individual students need to be included in parent-teacher conferences, IEP meetings, student support meetings, discipline hearings — any discussion in which they are the main topic.

5. More broadly, consider young people as stakeholders and partners in their schools.

When school leaders set new goals or make a major decision, they should expect students to contribute. At the same time, educators should be willing to help students as they shape and achieve their own aspirations for their learning” (Shafer, 2016, pg. 2).

According to Brion-Meisels, the school building needs to create a culture that exposes students to different ways of learning and approaching problems, normalizes the giving and receiving of feedback, and gives students the time, space, and power to construct and test their own ideas in order for students to feel as if they have a voice (Shafer, 2016).

When schools give students the agency and the tools to speak out, the effects can resonate across students’ lives (Shafer, 2016). If students are engaged from a young age, they will gain a set of strategies that can be used to create positive change in future classrooms or communities. Also, if students, teachers, and school administrators can form authentic partnerships, it can set the stage for lasting bonds and important mentoring relationships (Shafter, 2016). Schools can benefit as well. Changes initiated with student input are likely to improve the learning environment for all students, not just those involved in the change (Shafer, 2016). If students feel appreciated and supported, they will feel more connected to their school community. Brion-Meisels adds, “The evidence is pretty clear that when organizations, including schools, give young people agency and voice, and integrate their perspectives into decision-making processes, those organizations are more effective in the work they’re trying to do” (Shafer, 2016, pg. 3). Standardized testing aims to collect data to inform teachers, lawmakers, administrators, parents,

and teachers what their students know. It is imperative that students, not just the “adults” are allowed to have a voice about these tests that have such high stakes for everyone.

Discussion

Overview of Findings

The purpose of the literature review was to focus on students' view of standardized testing and how they can be given a voice to share those views in school. This review of literature summarized testing bias and students' feeling towards standardized testing. The review identified the causes of testing bias (i.e. language differences, home literacy experience/culture, and teachers' expectations as well as types of testing bias (i.e. economic bias, gender bias, and racial bias). Research was shared and discussed that illustrated the an inverse relationship between anxiety and test stress with academic achievement which is likely caused by testing bias. Higher anxiety and stress equal lower standardized tests scores. Many students experience high stress and anxiety towards testing either based on self-reported or based on cortisol levels. Current research was summarized that supports the idea of listening to students' ideas is the positive change education needs.

Recommendations

There are many opportunities to make suggestions for further research. Further research is recommended to determine elementary school and middle school students' attitudes and feelings towards testing. There is limited research on these age groups. It would be interesting to look at if/when students' attitudes towards testing begins to sway more negatively. The findings of the studies on students' attitudes towards testing mainly discuss high school, undergraduate, and graduate school students. The findings of the studies indicate that students experience high

stress and anxiety during high-stakes, standardized testing that may be caused by prevalence standardized testing bias.

Summary

Standardized testing isn't going to stop happening. However, students' negative attitudes towards standardizing testing--anxiety and stress--can be changed by listening to student perspectives and making changes to policies, assessments, and programs. Allowing students to have their voice will truly change the world. Students are the future. Students deserve to have equal opportunities to succeed. No child deserves to be at a disadvantage. No child deserves to be silenced. With more listening from lawmakers, policymakers, test makers, administrators, teachers, and parents come less bias. Less bias will lead to more positive attitudes—less stress and anxiety—towards standardized testing for students. Students' more positive attitudes towards education and testing leads itself to higher performance academically, socioemotionally, and physically. It's time for students to be given their voice back. It's time to put education back in their hands.

REFERENCES

- Balart, P. and Oosterveen, M. (2019). Females show more sustained performance during test-taking than males. *Nature Communications*.
- Catts, H. W., Fey, M. E., Zhang, X., & Tomblin, J. B. (1999). Language basis of reading and reading disabilities: Evidence from a longitudinal investigation. *Scientific Studies of Reading*, 3(4), 331–61.
- Carlisle, J. F., Fleming, J. E., & Gudbrandsen, B. (2000). Incidental word learning in science classes. *Contemporary Educational Psychology*, 25, 184–211.
- Chapell, M.S., Blanding, Z.B., Takahashi, M., Silverstein, M.E., Newman, B., Gubi, A., & Mccann, N. (2005). Test anxiety and academic performance in undergraduate and graduate students. *Journal of Educational Psychology*, 97 (2), 268-274.
- Cummins, J., Brown, K., & Sawyers, D. (2007). Literacy, Technology, and Diversity: Teaching for Success in Changing Times (pp. 91-111). *Boston, MA. Pearson*.
- Dutro, E., & Selland, M. (2012). “I like to read, but I know I'm not good at it”: Children's perspectives on high-stakes testing in a high-poverty school. *Curriculum Inquiry*, 42(3), 340- 367.
- Elesserr, K. (2016). Is the College Board Making the SAT more difficult for women? *Forbes.com*
- Elesserr, K. (2019). Lawsuit Claims SAT and ACT are Biased—Here’s What Research Says. *Forbes.com*
- Entwisle, D. R., & Alexander, K. L. (1988). Factors affecting achievement test scores and marks of black and white first graders. *Elementary School Journal*, 88, 449–72.
- Fielding, L. G., Wilson, P. T., & Anderson, R. C. (1984). A new focus on reading: The role of trade books in reading instruction. In T. E. Raphael & R. E. Reynolds (Eds.), *The contexts of school-based literacy* (pp. 149–62). New York: Random House.
- Gaudry, E., & Spielberger, C. D. (1971). Anxiety and educational achievement. New York: Wiley.
- Handel, R. D. (1999). Building family literacy in an urban community. New York: Teachers College Press.
- Harlen, W., & Deakin Crick, R. (2003). Testing and motivation for learning. *Assessment in Education: Principles, Policy & Practice*, 10(2), 169-207.
- Hartcollins, A. (2016). Tutors see stereotypes and gender bias in SAT. Testers see none of the above. *Forbes.com*
- Jerald, C. D. (2006). The hidden costs of curriculum narrowing. *The Center for Comprehensive School Reform and Improvement*.
- Khalid, R., & Hasan, S. S. (2009). Test anxiety in high and low achievers. *Pakistan Journal of Psychological Research*, 24(3-4).
- Nicholson, A. M. (2009). Effects of test anxiety on student achievement (ACT) for college bound students. *Dissertation Abstract International*. DAI-A-70/07, AAT 3366126
- Obiakor, F. E. (1999). Teacher expectations of minority exceptional learners: Impact on

- “accuracy” of self-concepts. *Exceptional Children*, 66(1), 39–53.
- Purcell-Gates, V. (1996). Stories, coupons, and the TV guide: Relationships between home literacy experiences and emergent literacy knowledge. *Reading Research Quarterly*, 31, 406–28.
- Rana, R. and Mahmood. (2010). The Relationship between Test Anxiety and Academic Achievement. *Bulletin of Education and Research December 2010, Vol. 32, No. 2 pp. 63-74*.
- Rist, R. C. (1970/2000). HER classic: Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. *Harvard Educational Review*, 70(3), 257–301.
- Schonwetter, d. J. (1995). An empirical investigation of effective college teaching behaviors and students’ difference: Lecture organization and test anxiety. Paper presented at the annual meeting 1 *American Educational Research Association* (San Francisco) Canada.
- Shafer, L. (2016). Giving Students a Voice. *Usable Knowledge by Harvard Graduate School of Education*.
- Simpson, C. (2016). Effect of Standardized Testing on Students’ Well Being. *Harvard Graduate School of Education*.
- Tatter, G. (2019). Test and Stress Bias. *Usable Knowledge by Harvard Graduate School of Education*.
- Torgesen, J. K. (1998). Catch them before they fall: Identification and assessment to prevent reading failure in young children. *American Educator*, 32–39.
- Washington, Julie, A. (2001). Early Literacy Skills in African-American Children: Research Considerations. *Learning Disabilities Research and Practice*, 16(4), 213-221
- Washington, J. A., & Craig, H. K. (1994). Dialectal forms during discourse of poor, urban African American children. *Journal of Speech and Hearing Research*, 37, 816–23.
- Wong, A., and Ross, T. F. (2015). When teachers cheat. *The Atlantic*.
- Vellutino, F. R., Scanlon, D. M., & Tanzman, M. S. (1998). The case for early intervention in diagnosing specific reading disability *Journal of School Psychology*, 36(4), 367–97.