Journal of Education

STANDARDIZED TESTING, ITS SECURITY AND IMPACT ON COMPONENTS OF SECONDARY SCHOOL SYSTEM IN NIGERIA

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Abstract

A standardized test is designed in such a way that the questions, conditions for administration, scoring procedures, and interpretations are consistent and is administered and scored in a predetermined, standard manner across all groups. A standardized test has serious implications for students, teachers, test preparation, schools, states and the country at large. The fairness and accuracy of tests are critical to enable valid inferences about human behaviour and to protect examinees from the misuse of test results. For this reason, test users have a professional and ethical obligation to ensure the security of these processes and materials at all times. Test security involves protecting assessments, so that the results from those assessments can be trusted and used to make important decisions about individual competence. Testing organizations, test administrators, teachers, schools, states and countries should conduct standardized tests in accordance with set down rules and directives so that the scores awarded to students reflect the true ability of the students. Hence, it was concluded that all students should be provided with high quality education so as to ensure good academic achievement in standardized tests. Finally, it was recommended among others that as the use of testing increases in organizational settings, across international borders, and through an increasingly technology-based delivery framework, testing organizations should pay special attention to the enhancement of test security.

Keywords: Standardized Testing, Test Security, Secondary School System

Introduction

A standardized test is one that is administered and scored in a consistent/ standard manner. In standardized testing, tests are designed in such a way that the questions, conditions for administration, scoring procedures, and interpretations are consistent and in conformity with standard practice. Standardized testing began in Massachusetts under the direction of Superintendent Horace Mann during the 1840s to assess student knowledge in several content areas (Resnick, 2012). Comparisons between schools and classrooms were made and the results of these examinations were published (Hamilton, 2013). Within the next 30 years, Resnick (2012) indicated that other states began administering tests and reporting their results in newspapers. Student promotions that had been based on teacher recommendations became tied to performance on these tests (Heubert & Hauser, 2016). The concept of measurement-driven instruction evolved from the minimum

competency testing movement in the United States (Hamilton, 2013). The prevailing thought was that testing could influence what was taught. With this, there was a heightened concern over student and school performance. This led to increased testing and school-level incentives (Hamilton, 2013). The 1990s standards movement increased the awareness of the links between standards, curriculum and testing. The links and formal stakes enhanced motivation to increase performance (Smith, 2011). Lewis (2010) and Holland (2016) indicated that standardized testing encourages students and educators to approach teaching and learning process seriously.

Over the last 50 years of educational reform, the common trend was the increased use of standardized testing for accountability purposes due to the concern for student, program and school performance (Cimbricz, 2012). Similar to the business leaders concerns about students' ability to read and write during the 1970s, researchers today are indicating that some students are exiting school without the knowledge and skills to survive in an increasingly competitive world (Cimbricz, 2012; Wakefield, 2013).

Phelps (2015) reported that poll and survey data have indicated that the general publics' positive view of standardized testing, for example, the percentage point differential between positive responses and negative responses to standardized testing was a +90 for students being required to pass a graduation test. Driesler (2011) reported that 90% of parents wanted information that would allow the comparison about their children and schools. Policy makers, parents, and the general public continue to demand better school performance and view the results of standardized testing as proof of learning (Wahlberg, 2013). Standardized tests results can be used to demonstrate to taxpayers that their money investment is used effectively to produce quality outcomes

(Nolen, Haladyna & Hass, 2012). Hummel-Rossi and Ashdown (2012) suggested three possible explanations for standardized testing's popularity; fairness to all students since no student receives preferential treatment; scientific since the tests undergo examination for validity and reliability, and common place due to the frequency of administration.

Another potential reason for standardized testing's popularity is the ability to provide a numerical score that can be indexed to an alphabet that represents quality and achievement (Bauer, 2010). Linn, Miller and Gronlund (2005) indicated that arguing against the use of standardized tests results dismisses relevant information that might lead to better decision making. Standardized tests are essential to confirm grading systems that vary from teacher to teacher and from school to school (Holland, 2013). Grade point averages and course grades are too unreliable for use as outcome measures (Phelps, 2015).

Brown (2012) stated that a divergence between grades from classroom teachers and scores on standardized tests can be a wake-up call for parents, taxpayers and schools telling the public that students do not really know the subject matter and that teachers are too soft in their grading practices. Getting rid of standardized tests is like getting rid of thermometers, X-ray machines and blood pressure gauges in a doctor's office. Stone (2013) indicated that if one is to read the educational literature on standardized testing, one would get the impression that standardized testing has few advantages since so much of the recent literature is negative. Stone (2013) pointed out that during the 20th century that teachers and schools at the local level routinely used standardized tests for documentation of students', teachers' and schools' performance. Stone (2013) further elaborated that it was not until policymakers began to hold

competency testing movement in the United States (Hamilton, 2013). The prevailing thought was that testing could influence what was taught. With this, there was a heightened concern over student and school performance. This led to increased testing and school-level incentives (Hamilton, 2013). The 1990s standards movement increased the awareness of the links between standards, curriculum and testing. The links and formal stakes enhanced motivation to increase performance (Smith, 2011). Lewis (2010) and Holland (2016) indicated that standardized testing encourages students and educators to approach teaching and learning process seriously.

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schools accountable for test results that the limitations would become fatal flaws.

Teachers were very supportive of standardized testing in the 1970s and 1980s when the stakes were only for students (Phelps, 2015). While still supportive of standards, testing, and accountability, teachers support has declined. Teachers are under ever increasing pressure to increase performance of their students. There seems to be incongruence between what teachers believe is their instructional role in the teaching and learning environment and what standardized testing requires of teachers (Urdan and Paris, 2014). Standardized tests scores are very important in decisions regarding students, teachers and educational policies. In an effort to implement accountability measures for schools, teachers and even individual students, testing originally designed to provide information regarding individual student achievement and ability for diagnostic/prescriptive teaching efforts is now being used as the measuring stick for evaluating the success of students, teachers, schools, states and even countries (Hill, 2014). With important decisions resting on the results of certain test scores, it is important to know how well the scores reflect the quality of learning and education.

It is also important to consider whether decisions based on these tests tend to reflect accurate interpretations and result in best practice. Even a potentially useful tool for education may be considered inappropriate if its use routinely results in harm to students. It is not surprising to note that the impact of standardized testing on students, teachers and schools in Nigeria are enormous. Standardized test results are used for gathering data about student achievement over time and to hold schools and students accountable. Certain uses of achievement test results are termed "high stakes" if they carry serious consequences for students or educators. Schools may be judged according to the school-wide average scores for their students. Standardized test scores may bring public praise or financial rewards; low scores may bring public embarrassment or heavy sanctions. For individual students, high scores may bring a special certificate attesting to exceptional academic accomplishment; low scores may result in students being held back for further studies or employment.

Standardized tests are usually national or state-wide standardized achievement tests. If a test is standardized, it has set rules for administration, such that everyone taking the test receives the same exact directions and has the same restrictions of time and resources. Achievement tests are usually for one specific grade level and designed to create a distribution of scores. Popular national standardized tests in Nigeria are the West African Senior School Certificate Examinations conducted by West African Examination Council, Senior School Certificate Examinations conducted by National Examination Council, Unified Tertiary Matriculation Examinations conducted by Joint Admission and Matricu-lation Board, among others. It is in the light of this background that this study examined standardized testing and its impact on components of secondary school system in Nigeria.

There is need for standardized testing and the procedures of conducting the testing to be secured in Nigeria because proper test security will help lead to student results that are a valid and reliable measure of what each student knows and is able to do (Tommy & Harry, 2020). Test users have the responsebility to protect the security of tests. Test security is particularly important when assessments are used, for example, in selection, accountability, credentialing, or diagnosis because of the inferences drawn from the assessment's validity. Test security

deals with the protection of content of a test from unauthorized release or use, to protect the integrity of the test scores so that they are valid for their intended use. Advancements in technology have resulted in additional challenges for standardized test users related to maintaining the security of test content. These advancements require increasing attention to maintaining the security of test content so that the test consumers can be reasonably confident in the reliability, validity and fairness of their results.

The primary goal of test security is to protect the integrity of the assessment and to ensure that results are accurate and meaningful. According to Tommy and Harry (2020), good test security protects the investment of resources, time, and energy put into the creation, distribution and administration of the assessments and is integral in ensuring that no student has an unfair advantage or disadvantage in their assessment perfor-mance. For example, public disclosure of test questions before test administration may compromise the validity of test results, as some students would have advanced knowledge of specific items included on the assessment.

Standardized Testing

A standardized test is a test that is administered and scored in a consistent, or "standard", manner. Standardized tests are designed in such a way that the questions, conditions for administering, scoring proce-dures, and interpretations are consistent and are administered and scored in a pre-determined and standard manner (Olson and Sabers, 2018). Any test in which the same test is given in the same manner to all test takers, and graded in the same manner for everyone, is a standardized test. Standardized tests do not need to be high-stakes tests, time-limited tests, or multiple-choice tests. A standardized test may be any type of test, a written test, an oral test, or a practical skills performance test. The questions can be

simple or complex. The subject matter among school-age students is frequently academic skills, but a standard-dized test can be given on nearly any topic, including driving tests, creativity, athleti-cism, personality, professional ethics or other attributes.

The opposite of standardized testing is non-standardized testing, in which either significantly different tests are given to different test takers, or the same test is assigned under significantly different conditions in which the testing procedures are not strictly followed. Most everyday quizzes and tests taken by students during school meet the definition of a standardized test; everyone in the class takes the same test, at the same time, under the same circumstances, and all of the students are graded by their teacher in the same way (Tippins, 2015). However, the term standard-dized test is most commonly used to refer to tests that are given to larger groups, such as a test taken by all adults who wish to acquire a license to have a particular kind of job, or by all students of a certain age like the West African Senior School Certificate Examina-tions, Senior School Certificate Examina-tions, among others.

Due to the fact that every test taker gets the same test and the same grading system, standardized tests are often perceived as being fairer than non-standardized tests. Such tests are often thought of as fairer and more objective than a system in which some students get an easier test and others get a more difficult test. Standardized tests are designed to permit reliable comparison of outcomes across all test takers, because everyone is taking the same test (Olson and Sabers, 2018). However, both testing in general and standardized testing in specific are criticized by some people. For example, some people believe that it is unfair to ask all students the same questions, if some

students' schools did not have the same learning standards.

Test Security

A test gives important insight into key characteristics that brings about performance. This instrument is widely used in educational institutions and other settings, with the goals of their use ranging from low stakes (such as personal insight and development) to extremely high stakes (such as selection or promotion into coveted job positions). The fairness and accuracy of tests are critical to enable valid inferences about human behaviour and to protect examinees from the misuse of test results. For this reason, test users have a professional and ethical obligation to ensure the security of these processes and materials at all times. Hence, test security involves protecting assessments, so that the results from those assessments can be trusted and used to make important decisions about individual competence (Lewis, 2010; Stone, 2013).

Test security refers to the continuous maintenance and control of all test material within a testing program by only those individuals who are qualified and/or designated to have access to them (Tommy & Harry, 2020). Psychometricians are concerned with test security because of the strong impact that a breach of security can have on the standardization of the test, the integrity of the results, and the long-term value of the test itself. If the data collected from a test do not accurately reflect the examinee characteristics that the test was designed to measure, then the inferences that can be made from it may be meaningless (Olson and Sabers, 2018). Proper interpretation and use of test results thus relies on the assumption that test security was maintained throughout the assessment process.

Different Forms of Test Security Breach in Nigeria

Testing organizations or persons willing to breach test security may do so for any number of reasons, ranging from a single test taker's efforts to be hired for a job to an organized attempt to profit from the unauthorized release of high-stakes test material. Steps should be taken to identify the potential threats to test security for any operational testing program. Breaches of test security come in many forms according to Ibukun and Oyewole (2018) and some common examples include the following:

- Unauthorized removal of test materials from a test site
- Posting of test answers over the Internet
- A test taker asking another person to take the test in his or her place
- Unauthorized copying of copyrighted test materials
- Hacking into data storage locations to gain access to test results

Effects of Breaching Test Security in Nigeria

Test security breach does not only affect assessment integrity and reliability; they also diminish the potential financial and social benefits associated with testing (Tommy & Harry, 2020). Although these risks may differ in the level of importance for different test applications and user groups, they each represent significant concerns that can arise when test security is not maintained. Several significant risks associated with a poorly secured testing program are elaborated as follows.

- Decreased validity and reliability. Security breaches in test content and scoring affect validity and reliability. Test scores affected by a breach of security may not reflect the target construct of the assessment; this impinges on the ability to draw inferences between other constructs and outcomes and restricts the ability to measure consistently over time.

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- Ineffective selection procedures. Reduced validity in testing processes can have a significant impact on the effective selection of examinees into organizational settings; as validity declines, the number of selection errors increases.

- Decreased organizational performance. Ineffective selection procedures may further affect organizational performance outcomes and eliminate any advantage provided by the use of well-constructed assessments.

- Lowered confidence in assessment. High-profile cases of cheating and pirating of copyrighted content may also have an impact on social perceptions of the overall fairness of specific testing applications or even of the testing industry in general.

Means of Ensuring Test Security in Nigeria

Psychometricians have devised several means for protecting testing materials and procedures, including developing alternate/parallel test forms; proctoring testing sites; physically and electronically securing locations of test materials and results; monitoring and analyzing test response data for abnormal response patterns; regularly searching the internet for test content and test preparation materials; and copyrighting all testing materials (Tommy & Harry, 2020). Advances in testing procedures and electronic security software work towards enhancing ability to protect tests, test materials and information. For example, the expanded use of computer adaptive testing (in which examinees with different ability levels are likely to receive different test questions) will help to reduce opportunities for cheating by limiting the number of times a test question is presented to examinees. Although these methods can be effective at controlling for some loss of materials and content, ways to circumvent test protection are often found when the stakes associated

with the assessment are high (International Testing Commission, 2010; Schroeder. 2016). In these cases, testing professionals may take legal action to protect the security of a testing process (example, by asserting and defending the copyright on testing materials).

One of the most challenging threats to test security arises when a party to a legal or regulatory action requests test materials. Test users may be asked to provide, to lawyers and other individuals, confidential results. test content, and scoring keys as evidence or support for a case; however, the individuals who request the information may not be ethically or legally required to maintain test security (International Testing Commission, 2010). Test materials may then become part of a public record, thereby putting the test materials and examinee information at risk. In these situations, test users may ask that the requested material be delivered only to other qualified users who are ethically and legally obligated to maintain the confidentiality of the material. If this is not an option, test users may ask that the materials be covered under a protective order and that the materials be returned directly to the psychologist following litigation.

Social awareness of test security issues will also help to enhance test security and discourage individuals or groups from obtaining testing materials for the purpose of compromising the usefulness of an assessment process (Naglieri and Drasgow, 2014). One sign of the growing importance of test security is the emergence of specialists who can assist those who are responsible for testing programs with the development of policies and practices that facilitate test security. Over time, test security may be enhanced by the continued development of the knowledge base surrounding security issues. In the view of Schroeder (2016), research in test security can help build an understanding of the

factors that contribute to the likelihood of a security compromise, as well as the factors that help maintain the quality of a test under conditions in which security compromise may be likely, such as when a test is provided over the internet. In the views of Tommy and Harry (2020), advances in test security are also directly related to innovations in the techniques used to monitor and analyze test data for aberrant or unlikely patterns in test data, so that security breaches can be identified quickly.

Impact of Standardized Testing on Students' Learning

It is probably safe to say that the process of taking a large standardized test does well to improve the knowledge or skills of students. With feedback as to correct or incorrect responses, the exercise is one of demonstrating knowledge, skills and learning (Heubert and Hauser, 2016). The feedback the students receive from the test also has great potential for improving their learning, skills or knowledge. The results can provide students with a means of comparing themselves with their counterparts. They indicate whether they are "smarter" than their friends, or perhaps more importantly are they "dumber." Therefore, the impact that students feel from the testing process and resulting feedback is only enormous. It is the consequences and concern regarding these consequences that impact students and these consequences are significant. The results from standardized tests may decide whether students pass to the next grade level or are retained, can establish whether students are eligible for certain special programs, may determine whether students graduate from high school, or may decide to which college students will be admitted. These are events that have a major influence on students' lives.

It is because of what is at stake that students learn to value standardized tests. Students come to value learning and schooling and lay their emphasis on "is this going to be on the test?" (Paris, Roth & Turner, 2010). Although some students tend to hold standardized achievement testing in fairly high regard than regular classroom tests. negative perceptions and distinctions between regular tests and standardized tests increase by grade level, and are most pronounced among low achievers (Wong and Paris, 2010). These negative attitudes of resentment, anxiety, cynicism, and mistrust of testing are found to manifest themselves in test taking behaviours like loafing. cheating and stress related behaviours. Brown (2012) assert that as a reaction to standardized tests, some students experience headaches, upset stomachs, irritability, increased aggression, and freezing during parts of the test. He also opines that students cry, exhibit truancy, vomit and refuse to take standardized tests.

Impact of Standardized Testing on Motivation to Learn

Standardized testing assumes that rewards and consequences attached to rigorous tests will "motivate the motivated" to learn while the "unmotivated" are mostly identified as low socioeconomic students; yet researchers have found that when rewards and sanctions are attached to performance on tests, students become more intrinsically motivated to learn and more likely to engage in critical thinking (Paris & Urdan, 2010). In addition, they have found that standardized tests cause teachers to take greater control of the learning experiences of their students, spur students opportunities to direct their own learning. When the stakes get high, teachers encourage students to explore the concepts and subjects for good performance. Attaching stakes to tests apparently improve students' path to becoming lifelong and self-directed learners (Nolen et al., 2012).

Wong and Paris (2010) investigated the degree to which external tests motivated students to learn by examining the self-portraits of students in testing situations.

Students depicted themselves as motivated, confident and bold while taking standardized tests. Stone (2013) asserts that test-driven classrooms take away boredom, fear, and lethargy, promoting all manner of good academic behaviours on the part of teachers, students and schools and improve students' natural love for learning. In sum, the assumption that standardized tests motivate students appears is seriously high. In fact, such tests often increase students' motivation and lead to higher student achievement and retention rates.

Impact of Standardized Testing on Teachers

An important question is, does standardized testing change what and how teachers teach and, if so, does it change instruction for the better? It is hoped that standardized achievement tests encourage teachers to focus on meaningful achievement areas and improve those areas in their students. It is also believed by many that the cumulative scores of students reflect the quality of the instruction by teachers and can provide a basis for accountability. Teachers believe that standardized tests are useful to teachers (Paris and Urdan, 2010). Majority of teachers think that standardized achievement tests are worth the money or instructional time that they cost (Urdan and Paris, 2014). A review of the larger literature initially suggested that standardized testing positively influence teachers' beliefs and practice. Once a gaze focused on those works that could be identified as research, however, empirical support for the claim that standardized testing positively influences teachers' beliefs and practice are very strong (Cimbricz, 2012).

Impact of Standardized Testing on Instruction

A lot of people hold that standardized testing leads to a "back-to-basics" approach in terms of content taught and teaching approaches used. Research repeatedly yields that

teachers tend to understand the scope of their instruction and emphasize what could be tested, and also encourage more innovative teaching strategies, such as cooperative learning and creative projects, in favour of more traditional lecture and recitation (Brown, 2012). Because of the publication of test scores and the implications for the quality of teaching, teachers feel compelled to teach effectively so as to improve their students' scores (Smith, 2011).

Standardized testing also encourages the use of instructional approaches and materials that resembles testing (Smith, 2011). Rituals of multiple choice quizzes and test preparation take the place of "normal" instruction. Teachers exploring instructional practices informed by current views of learning and cognitive psychology that seek deeper understanding and critical thinking, may find those techniques and even those goals at odds with the drill and practice.

Impact of Standardized Testing on Test Preparation Approaches

Even though some test preparation is to be expected, the amount of time devoted to such activities and the nature of the test preparation speaks to the given to standardized testing. Teachers spend varying amounts of time preparing their students for standardized tests. Time that is devoted to learning skills and knowledge in an appropriate sequential fashion gets boosted in the process of preparing for the tests. According to Nolen et al., (2012), elementary teachers reported spending enough time in test preparation activities (33%), some started preparation two months before the tests (28%) and a few gave daily test practice over two weeks before the tests (10%).

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Nolen et al., (2012) found that along with practicing appropriate test preparation strategies, teachers made a point of covering all topics (66%), used commercial test preparation packages (41%), taught

vocabulary on the test (26%) and used practice items from the previous year's tests (12%). Hoffman et al., (2015) reported that teachers from lower scoring schools reported a higher incidence of questionable test preparation approaches, as well as blatantly unethical practices during testing such as giving hints, pointing out mistakes, giving instruction, and directly identifying correct answers.

Impact of Standardized Testing on Schools' Curriculum in Nigeria

Students can adequately be taught so that they can have good scores on standardized tests. For example, scores can be made to rise by ensuring that the curriculum is covered and well taught. Even in the curriculum areas that are tested, schools may teach sub-areas in case they are likely to appear on tests. For instance, if ruminants and non ruminant animals are not tested in standardized Agricultural Science tests, they may not be taught by teachers. Instructional time is shifted to the curriculum areas that will appear on the tests, and consequently scores on the standardized tests go up. Standardized tests cause other problems for the schools as well; schools often emphasize drill activities and use funds to buy test preparation materials that are supposed to increase scores, regardless of the fact they undermine the validity of the tests (Tommy & Harry, 2020). Unfortunately, the tests also corrupt some teachers, administrators, and students so that they even feel compelled to cheat.

These common problems of standardized testing are quite likely to affect the breadth and depth of student learning as schools narrow the curriculum they teach; make heavy use of drill activities tied to the standardized test (Brown, 2012). If standardized testing policies actually improve student learning, that improvement should be reflected not just in the standardized test scores but also in independent measures. In fact, one can make a much stronger case that standardized testing policies hurt student learning instead of helping it.

Impact of Standardized Testing on Schools, States and Nigeria

A very important consideration for any test as well as for any research study, is validity. For a test to be valid, it must actually measure what it purports to measure. If a standardized test is to be a valid measure of student learning, the quality of instruction of a teacher, or the effectiveness of the educational system of a school, state or country, that test must match the curriculum being taught (Tommy & Harry, 2020). If the state adopts a national standardized test that is not aligned with the state's curriculum, the test is not a valid measure of educational quality in the state. In fact, less effective teachers or schools that stray from the state's standards to focus on test content could appear more proficient than competent teachers efficiently teaching the standards.

A more expensive alternative to simply adopting a national achievement test is for the state to develop its own test designed to be a valid measure of student mastery of the state's standards (Bauer, 2010). Although states developing their own tests work to align the tests with their standards, the match between what is taught and what is measured (especially on national achievement tests) is still a major concern. Research studies strive to eliminate alternative hypotheses for the results of the study to be considered valid. Current outcome-based evaluation approaches look to the same rigors as research in attempting to test results. Therefore, if judgments are to be made concerning the relative quality of teachers, schools, states or countries, it is important that the results are valid measures of quality instruction and effective policies. If significant student achievement differences can be attributed to something other than educational quality, then the validity of

judgments concerning educational quality come into question.

A major threat to validity in educational research is selection bias. Selection bias may occur when the samples being compared are not randomly assigned to different treatment groups, such that the sample in the treatment groups are qualitatively different from each other in ways that can impact the results (Tommy & Harry, 2020). Then comparisons of the treatments (in this case, instruction and educational policies) are confounded by the differing nature of the samples. Students are not randomly assigned to schools and states, and often not even to teachers. There are qualitative differences in students that are not the result of instructional quality or educational policies. When students with like characteristics, known to be related to achievement, are over- or under-represented in samples, then those factors are difficult to ignore when making judgments concerning the groups' achievement (Lewis, 2010).

However, those suggesting the use of raw aggregated achievement test scores as a means of evaluating teachers, schools, states and countries are doing just that; they are ignoring the very real and present differences that exist in groups of students that are outside of the control schools. So it is mostly the aggregated characteristics of the test-takers that are being compared across states, not the quality of their education system. Although it is possible to statistically control for student differences due to demographic variables and other factors out of teachers' control, as has been done for years, many view these statistics as too complicated or as suspicious manipulations of the data (Ibukun and Oyewole (2018). Of course the easiest way for a state to change its level of success is to change the criteria for success. Most importantly, states should align their standards to national standards which are assessed through standardized testing.

Conclusion

Due to the importance of standardized testing, it is necessary to provide all students, including poor and low ability students with high-quality education with appropriate facilities, conducive learning classrooms, well-qualified teachers, adequate medical attention, among others so that they can be able to face standardized tests with little or no difficulty. It is time for Nigeria to critically ensure that all components of the secondary educational system are given the needed attention, incorporate and practice appropriate formative testing programs which uncover poor school performance, result in fiscal, intellectual, and social reforms that will make a difference for the students in the schools which will definitely lead to good academic achievement in standardized tests. Test security has both a direct and an indirect impact on the validity of the inferences that can be made from a test result. However, test security is a concern not only because of the impact a security breach may have on the psychometric qualities of a test and its proper inter-pretation, but also because of the financial and social implications that compromised assessment processes can have within organizations and the public.

Recommendations

1. Teachers should avoid coaching as a way of preparing students for standardized tests but should give students holistic and content-based instructions with diverse pedagogical techniques that align with the curriculum so as to appropriately equip students with diverse knowledge and skills needed for success in standar-dized testing and all round success in life even after secondary school education.

2. Students should adopt appropriate study skills and effective study habits and be seriously engage in instructional processes as these will make them grasp the contents of curriculum and retain what they have learnt, thereby making

them to respond to either school-based tests or standardized tests appropriately.

3. Teachers and school administrators should adopt and practice formative testing vigorously as this will help to identify students' challenges, weak points and limitations in school subjects and ensure that their weaknesses are overcome for them to be able to face standardized tests without cheating, fear and anxiety but with confidence and 'I can do spirit'.

4. Testing organizations, test administrators, teachers and schools states and countries should conduct standardized tests in accordance with set down rules and directives so that the scores awarded to students reflect the true ability of the students.

5. As the use of testing increases in organizational settings, across international borders, and through an increasingly technology-based delivery framework, testing organizations should pay special attention to the enhancement of test security.

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