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EDUCATIONAL ACCOUNTABILITY IN NIGERIA: SCHOOL DATA BEYOND STUDENT PERFORMANCE DATA

Obinna C. Ofozoba, Ph.D.
Nancy P. Autin, Ph.D.
Frank S. Del Favero, Ph.D.
University of Louisiana at Lafayette
United States
obinnaofozoba@gmail.com
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Abstract

Nigeria as a country has been in a perpetual struggle to improve its educational system. So many factors have been identified as major setbacks to the attainment of the country's educational goals. Some of these factors include inadequate funding, poor implementation of educational policies, unqualified teachers, and lack of accountability. The phrase 'lack of accountability' within the context of this work refers to inadequate use of data in both the administrative and instructional decision-making process. Different data types are available in schools, but there is little or no research indicating that they are put to optimal use. This underutilization of data resources could be linked to lack of data analytic and interpretation skills on the part of some school administrators and teachers. Overtime, most schools have relied solely on student performance data or students results (grades from tests and government approved examinations) to measure how well a school is performing in meeting its educational goals. However, research has shown that student performance data as an output data is limited because it does not provide information on the processes that led to the output. It is therefore necessary to incorporate the input data (demographic, perception, and school process data) to get a comprehensive view, identify root causes for not meeting goals, and plan the next action steps. Using the method of analysis, this work aims to identify other data types (demographic, perception, and school process data) that contribute to the student performance data. This will be followed by the analysis of each data type to determine the role in the school improvement plan. We shall discuss the way forward in using data to improve teaching and learning in Nigeria's school and finally conclude.

Keywords: Education, Accountability, Nigeria, School, Student

Introduction

A lack of data and inadequate use of relevant data to measure teaching and learning are major contributors to the problem facing Nigeria's Education System. Addressing this critical problem is essential in monitoring student progress and setting a vision for maximal student learning and overall school effectiveness throughout Nigeria. Utilizing multiple data sources will poise Nigeria's schools to better prepare its youth for their future in a globally competitive society. The purpose of this presentation is to identify and discuss types of data for making instructional and administrative decisions to improve teaching, student learning, and overall school effectiveness. The questions guiding this discussion are:

1. What essential data types contribute to improving teaching and ensuring maximal student learning?
2. In what ways do the four types of data support and enhance teaching and learning?

Background

The place of data in the 21st century world cannot be over emphasized. "Data plays important roles in industries such as manufacturing, entertainment, and service industries such as education, marketing and healthcare" (Del Favero, 2019, p. 1). It is therefore necessary that "Decisions made by Educational leaders must be well thought out and based on data and research" (Autin & Davis, 2019, p. 57). John Dewey (1916), in 'Democracy and Education', described education as *learning by doing*. This implies a continuous process of trial and experiments. The above description of education by John Dewey explains why it is proper to have a yardstick for measuring the extent of students' learning. Most schools rely essentially on test scores as a means of measuring how well students are performing. However, Bernhardt (2000) disclosed that "Test scores alone won't tell you who your students are, which ones are doing well, and why others are not as successful" (p. 1). They show how students are performing but do not assist the school to diagnose problems or manage improvement (Hess, 2008/09). Gathering data in a school means looking at information from three different

critical audiences: students, teachers and staff, and the school community (Bernhardt, 2000). Attainment of the above objective involves providing leadership direction to data teams, modeling effective data use, scheduling time for collaborative data-driven conversation and connecting data analysis to clear action steps" (Ronka, D. et al., 2008/09).

Review of Literature

Well known author on organizational change in schools, Reeves (2009) affirms, "Only few candidates will look deeply into the data and guide the conversation about instructional practices, pursuing questions about differences in instruction, curriculum and assessment in the schools" (p. 69). Sustainable change requires understanding and utilizing school information obtained in data to guide meaningful and compelling decisions for school improvement. Bernhardt (2000) revealed that effective data analysis of a school or program includes four different types of data: Demographic, Perception, Student performance and School process data.

Demographic Data

Demographic Data provides a statistical representation of the school stakeholders: students, faculty and staff, parents and community. Some of the information provided by this data typically includes ethnicity, age, gender, marital status, phone numbers, level of education and home address (Del Favero, 2019). School leaders may use demographic data in a variety of ways to inform teaching and learning decisions. For example, school enrollment information helps the school build its profile including specific information about every student, their families, socioeconomic status, and community services. These details help in the preparation to accommodate and meet the student learning needs. It also helps the school to determine the class size as well as the number of teachers needed to accommodate the program of study most efficiently. Teacher-student ratio is used to ensure that the number of teachers and staff is sufficient to provide the required educational services to the students. Information obtained from demographic data helps the school make decisions to meet the academic needs of all students.

Overtime, school leaders will be able to tell from analyzing this data changes that have taken place, identify trends and modified or create new goals based on result of data analysis. Student enrollment information for three years should tell the administrators whether the school enrollment is increasing, declining or

remains constant. Another important benefit of collecting and analyzing demographic data is that it helps a school project budget and resource allocation

Perception Data

Perception data provides vital information on school stakeholders' opinion of the school in a variety of areas. This data typically informs school leaders of what students, teachers, parents, and community members believe about the school climate, the instructional program, school resources, and stakeholder-school relationships. Community members play an important role as objective observers in assessing the overall school environment, programs and service to the people in the community.

Perception data is obtained through surveys, observations, and interviews. It identifies areas of strength and opportunities for improvement. Schools gather perception data from stakeholders to assess how well the school is doing in all areas. It is instructive to note that perception data differ according to stakeholders. In gathering this data, survey instruments and interview questions must be designed to elicit the right information from the target stakeholder, either the students, teachers, parents or community. Knowing stakeholder perceptions is critical in creating positive change in the school environment (Autin, 2019). Overtime, this data should be able to indicate how the perception of stakeholders may have changed. Stakeholders' perception of the school will determine action steps defined by school leaders in collaboration with the school improvement team to be included in the school wide improvement plan.

Student performance Data

Student performance data describes an educational system in terms of standardized test results, grade point averages, standards assessments, and other formal assessments (Bernhardt, 2000). Schools, Districts and States view performance data as how a student or group of students score on standardized tests. Assessment under this data type is summative (output data). It does not include information gathered during instruction, formative assessment.

On the other hand, Summative Assessment is used to measure achievement – how well did the student meet objectives? It occurs after instruction at the end of

a unit, the end of a term, or the end of the school year. It is used to assign grades and to determine next level of school (Autin 2020, Del Favero2019). Standardized tests are summative. This data is important in the school improvement process because it evaluates programs and level of student learning. It also serves as a guide to curriculum development and instructional planning. Over a period of time, this data will be able to indicate the level of progress in students' learning. An analysis of performance data will reveal trends in school wide achievement and shed light on academic performance of subgroups

School process data

School Process data describes programs and pedagogical practices that support teaching and learning. It comes in a variety of forms and provides information on the day-to-day functioning of the school. This data information can be derived from the master schedule, school academic calendar, professional development data, student discipline data, Teacher observation and evaluation data, Response to Intervention data and non-confidential information from the guidance department (Del Favero, 2019). Information from these sources can be used to measure the overall effectiveness of school processes and programs. A major benefit of process data is it helps to identify the root causes of areas of concern in the school's programs. Consequently, decisions can be made regarding appropriate actions to be taken to eliminate concerns and reassess steps for achieving desired outcome. For example, data collected from teacher observations help identify strengths and weakness of teachers. This data helps administrators create appropriate professional development plans to address areas of concern to improve teaching. Improving teaching results in improving learning for students.

An optimal benefit of process data is it allows administrators to gain an understanding of how well the curriculum is being implemented. The short-term analysis of process data demonstrates what we have done in a particular content area of subject or program such as mathematics or the reading program. This allows administrators, program directors and teachers to evaluate how well curriculum is being supported and implemented school wide. When school process data is analyzed over a period of three to five years, the trend will show the dynamics involved in teaching a content area of the years under review indicating if there is improvement, retrogression or stagnation.

Critical Role of Data in Education:

Data-driven decision-making involves gathering data to determine if a school or district is meeting its purpose and vision (Bernhardt, 2000). It helps to identify the root causes of teaching and learning challenges. Because of the high reliability of data, schools use data to replace guessing with facts when making administrative and instructional decisions. It is through data that the link between teaching practice and student performance can be established (Miller, 2000). Data help educators to assess teaching and learning needs from multiple sources. Evaluating teaching and learning through the lens of demographics, perception, student learning and school process data will provide administrators and teachers with diverse perspectives to diagnose factors contributing to teaching and learning challenges. It helps determine what tools and resources are needed to address concerns.

Data collection and analysis provide an accurate profile of the school including student performance, school culture and climate, governance, community perception and involvement. "Data-driven management should not simply identify effective teachers or struggling students but should also help render schools and school systems more supportive of effective teaching and learning" (Hess, 2008/09). Data analysis results guide the establishment of a comprehensive improvement plan including goal setting, implementation protocols, and monitoring and evaluation strategies. Overall, data provides the foundation for creating a meaningful school vision and articulation of action steps to accomplish goals (Autin, 2020).

Data and Nigerian Education:

Over the years, Nigeria's education system has constantly struggled in its quest to keep up with the educational advancements of countries around the world. One of the key factors of 21st century advancements in education is the indispensable role of using data in schools to make critical decisions to improve teaching, learning, and school effectiveness at all levels. It is a common practice that educational institutions in Nigeria engage in a variety of data collection. Data collection begins with the application, enrollment, and continues throughout schooling, including graduation data. The true impact is aborted as currently there is little to no research indicating how school data is used to guide improvements in teaching and learning. This regrettable situation may be indicative of a lack of knowledge and skills in collecting, analyzing, and

interpreting data by school personnel at all levels. This void may also be attributed to a lack of understanding of the profound role in using data to impact and sustain a school's vision for school improvement. Once this impact is realized, Nigeria is ready to take the first step towards becoming an educationally advanced country equal to its counterparts around the globe

The Way Forward- Using Data to improve education in Nigeria

To secure a place as an educationally advanced country in the world, Nigeria must institutionalize the collection and use of data in schools. It is a multi-pronged process. Mandatory guidelines must be created to ensure schools at all level have comprehensive data-driven plan for collecting, analyzing, and using results to improve teaching, learning, and overall school effectiveness. State mandatory guidelines must charge schools to establish a school improvement team that will be responsible for the coordination, implementation, and monitoring of the schools' data plan. The schools should first engage in an assessment of data sources already in place and identify data sources needed to improve student achievement and overall school effectiveness.

Experts in school improvement warn gathering high-quality data is not enough. School must invest in data teams, data coaches, time in the school calendar for collaborative analysis, developing faculty and staff data analysis and interpretation skills (Boudet & Steele, 2007; Lachat & Smith, 2004; Love, Stiles, Mundry & DiRanna, 2008). This requires professional development for administrators and teachers, an integral component of the school's data plan.

This is critically important to overcome the inhibitions derived from a lack of data analytic skills. Data teams and coaches will guide each school in becoming proficient in using data to improve teaching and learning. "It is only when we articulate the 'why' behind the data and turn the lens on our own teaching and leadership behaviors can we understand how to move from drowning in data to improving professional practice" (Reeves, 2008/09). Moreover, the school improvement team, data team and data coaches must be trained on using the research process to design action research plans for improving and eliminating achievement gaps identified in the data analysis (Autin, 2019).

To promote success and ensure accountability to mandatory data guidelines, state education department should provide resources to schools to support their successful implementation of the data guideline requirements. When these

measures are in place, each school will advance to the next level of achievement. Collectively, Nigeria is well situated to become an educationally advanced country.

Conclusion

This paper discussed the role of using different kinds of data as an integral component of accountability in Nigeria's schools. It disclosed that apart from student performance data which can be categorized as output, there are other types of data (input data) that complements student performance data. These data include demographic, perception and school process data. These different types of data provide school administrators with vital information to make informed administrative decisions to improve teaching and learning. With the identification of the four data types, this paper examined why data is very fundamental to educators. One of the major reasons is the need to build a school vision and articulate an action plan for school improvement based on verifiable facts from data. Moreover, because there is little to no research indicating that school data is put to good use in Nigeria, actions steps were suggested to integrate the collection and use of data in Nigerian schools to enhance teaching and learning.

Educational leaders in Nigeria must understand the central role of data in their school improvement, planning and processes. They also need to know that different data types do not contradict one another. Each provides information which contributes to designing a comprehensive master plan for continuous school improvement.

The intersection of these data provides vital information which through careful analysis, the school leaders working collaboratively with stakeholders (faculty, parents and community members) will be able to identify areas of strength and opportunities for improvement. The resulting plan will provide a reliable roadmap for accomplishing goals and realizing the school vision for maximal learning for all students.

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