Introduction

Simply defined, accountability means being held responsible and having to justify actions or decisions, as shown in the following Google search of the word "accountability":

Accountability leads to better decision making. When people are held responsible by others for the effects of their actions, they are more prone to contemplate their decisions before making them to determine what action would lead to the best outcome. Therefore, accountability in education can and should be a good thing. States, districts, and schools strive for accountability, spending millions of dollars on assessment programs to ensure that their educational systems perform the way they are supposed to. However, the next step, which many educational systems fail to do, is to then use the accountability data to improve teaching and learning.

Accountability in Education

Teachers, principals, and administrators are responsible for the teaching and learning that takes place in schools. Accountability testing was optional under the Elementary Secondary Education Act (ESEA)¹ but became mandated and operationalized with the No Child Left Behind Act (NCLB),² the latest reauthorization of ESEA. The goal of accountability in education is to help ensure that every student attending a public school has a fair and equitable educational experience. NCLB may or may not have gotten it right, but one thing is certain: accountability will not go away as long as the federal budget continues to include billions of dollars for public education.

School accountability is aimed at informing the public and, more specifically, students, parents, and school personnel about how well a school is performing with regard to the teaching and learning in that school. States, districts, and schools are held accountable for student performance, and the

primary responsibility for what students learn is placed at the school and teacher levels. This is especially true as indicated in Race to the Top and NCLB Waiver requirements.

How, then, does one know whether learning has taken place? Once upon a time, grades given by the teacher sufficed as a measure of student learning. However, as society improved its technologies and the demands of the workplace changed, first with the industrial revolution and then with the information revolution, grades can no longer be used as valid and reliable measures of student learning. Studies of grade inflation are numerous, as are concerns from businesses and higher education about the lack of college and career readiness of students graduating from U.S. public schools. Furthermore, the advent of international comparisons has demonstrated that other countries are outperforming the U.S. in reading, mathematics, and science.

Those international comparisons are only a few of many studies that can be cited about the demise of U.S. education. Figure 1 is a chart of historical SAT scores. Whether looking at the old scale ending in 1994 or the new scale, the general trend is downward or at best flattening.

**Figure 1.** Historical SAT Scores
There are similar charts for ACT scores, as well as scores from the National Assessment of Educational Progress (NAEP). Despite what may look like a bleak outlook for U.S. schools, these comparisons and longitudinal pictures should not be used to disparage education. Rather, accountability data, in whatever form it may take, should be ingested and ruminated on by teachers, administrators, parents, and students so that improvements can continuously be made.

**Research-based Decision Making**

A key phrase in legislation, Race to the Top documents, and NCLB Waivers is “research-based decision making.” This implies that thought and work should go into any changes being considered. In other words, thoughtful contemplation should be given to the results of testing programs and assessment systems prior to making changes. Unfortunately, with every score release of a testing program or international comparison, a knee-jerk reaction often occurs about the specific results, whether positive or negative. That is, people tend to perceive the test results as definitive proof that a school system is failing or excelling at teaching students, without analyzing all aspects of the educational system to determine how to make improvements. The test data is then often forgotten about until the next score release.

**Using Accountability Data to Improve Learning**

Today, most U.S. districts have some form of Learning Management System (LMS), which are typically large databases containing all the relevant information about students in that district. Unfortunately, when states, districts, and schools are inundated with data, that data remains mostly housed in the LMS and not used much or at all. It may not be used simply because it is too overwhelming to make sense of the bits and pieces contained in these systems. Therefore, we go from score release to score release, lamenting the state of teaching and learning and bemoaning the use of accountability testing without putting it to its proper use.

To use accountability data in a more meaningful way, states, districts, and schools could use their current data to help adjust the parts of the educational system under their control (e.g., curriculum, pacing, student placement, and course selection). This could be done by analyzing the bits and pieces of stored data over the past three or four years and gauging whether the scores for each test administered increased, remained flat, or decreased. Next, school systems could determine whether the various testing programs demonstrate similar trends in direction. If the direction is the same, it can be concluded that students are progressing as expected. It is important to understand that having multiple measures indicating the same kind of results is more powerful than looking at any single score release.

**Statistical Analyses**

An even better way to examine the data is to run statistical analyses, which help organize and visualize the data and provide a clearer and more understandable picture of what the data shows. Figure 2, which shows multiple test scores across multiple years for an individual student, suggests
one possible way of looking at the data. It shows the trend of the student’s scores in Reading from grade 6 to grade 11. These scores are then related to ACT scores to determine whether the student is on track to achieve a composite score of 18 on the ACT. The graph in Figure 2 also shows scores on Accuplacer, which are tests used to determine students’ knowledge in Mathematics, Reading, and Writing to help decide enrollment in college courses. The Accuplacer scores indicate one semester remediation versus no semesters of remediation, and this graph shows whether the student is on track for one semester of remediation or no remediation.

**Figure 2.** Student Trend in Reading Performance to Determine Potential for Achieving Target Scores

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### Student Trajectories for Reading Success

<table>
<thead>
<tr>
<th></th>
<th>6th Grade</th>
<th>7th Grade</th>
<th>8th Grade</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>Grade 11</th>
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<td>Fall</td>
<td>Spring</td>
<td>Fall</td>
<td>Spring</td>
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<td>200</td>
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<tr>
<td>State Reading</td>
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<td>740</td>
<td>855</td>
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<td>215</td>
<td>1055</td>
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<tr>
<td>ACT Composite</td>
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<td>189</td>
<td>197</td>
<td>203</td>
<td>207</td>
<td>211</td>
</tr>
<tr>
<td><strong>For Accuplacer Remediation</strong></td>
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<td>198</td>
<td>207</td>
<td>221</td>
<td>215</td>
<td>220</td>
</tr>
<tr>
<td><strong>For Accuplacer No Remediation</strong></td>
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<td>220</td>
<td>225</td>
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<td></td>
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<tr>
<td><strong>For ACT =18</strong></td>
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<td>758</td>
<td>855</td>
<td></td>
<td>1060</td>
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**Jim J.**
Similar graphs can be created for other assessment programs to determine if students are on track to reach specified targets (such as an ACT composite score of 18) determined by the state, district, school, or whoever is analyzing the data. By looking closely at students’ scores from an early grade (e.g., grade 6) and determining the target goal of performance, changes can be made to the curriculum, teaching strategies, and the materials used by students to help them improve or get on track for the performance targets set by the educational system.

For the student depicted in Figure 2, the trajectory to achieve the target of an ACT composite score of 18 was not met. However, this graph was only recently created and the student had already completed the assessments. However, for the student just entering grade 6, this type of information will allow the student, teacher, parent, and administrator a clear and simple look at where the student is and where they need to go in terms of learning.

**Summary**

Accountability in education is not just about being held responsible for actions—it is also about using accountability data to improve teaching and learning so that students are better prepared for college and career upon high school graduation. Accountability systems, such as statewide standardized assessments, and the data associated with them can provide good pictures of what is happening with regard to teaching and learning. States, districts, and schools just need to spend more time investigating the relationships among and between the various data points and turning that into meaningful information for students, teachers, parents, and administrators.