Proposition 301, also referred to as Education 2000, was the genesis of school accountability in Arizona. Proposition 301, initiated by Governor Jane D. Hull, instituted a six-tenths of a cent sales tax increase dedicated to public education and school accountability provisions. In November, 2000, voters approved Proposition 301 by a margin of 53 percent, with 47 percent opposed. The school accountability provisions in Proposition 301 are intended to improve public education through the development of achievement profiles for all schools, the public dissemination of achievement profiles, the implementation of school improvement plans and escalating levels of state intervention in persistently low-performing schools.

In the original legislation, the state legislature prescribed the specific academic indicators and performance targets to derive the achievement profiles, commonly referred to in the media as “school labels.” The narrow set of academic indicators included Arizona Instrument to Measure Standards (AIMS) results, the Measure of Academic Progress (MAP) results, and dropout rate data.¹

The performance targets were prescriptive, and despite the state legislature’s intent to establish rigorous targets, the original performance targets set minimal academic
expectations. Schools had to meet *all* of the following criteria in order to avoid being designated as “Underperforming”:

- 90 percent of students, or a higher percentage than the year before, must meet or exceed the standards in all three AIMS subject areas.
- 90 percent of students, or a higher percentage than the year before, must make a year’s worth of gain on MAP, an indicator of academic gain calculated from students’ scores on the Stanford Achievement Test Ninth Edition (Stanford 9).
- A dropout rate of 6 percent or less, or lower than the previous year.

In practice, the performance targets meant that any improvement, regardless of the school’s baseline achievement level, was sufficient to meet the requirements. In addition, the state legislature included only pupils “continuously enrolled” in the achievement profiles, leaving out a large percentage of the student population.

“Failing” was the only other school classification in the original legislation. A school was classified as “Failing” if it remained “Underperforming” on the same academic indicator for two consecutive years. The legislature revised the original achievement profile criteria in 2002 and it was never implemented.

The consequences for Underperforming and Failing schools in the original legislation require extensive public notification as well as the implementation of a School Improvement Plan (SIP). If a school is designated as Underperforming or Failing, the local school board must provide written notification to each residence within its attendance area that includes a detailed description of the academic indicator on which the school failed to demonstrate acceptable progress. The local school board is also responsible for developing and supervising the implementation of the SIP and for holding a public meeting to present the plan. If a minimum number of schools in a district are designated as Failing for more than two consecutive years, local school board members must insert language to that effect on the next election ballot.²

The Arizona Department of Education (ADE) is required to include each school’s Achievement Profile in the Arizona School Report Card and to publish a list of “Failing” schools in a newspaper twice a year.
State intervention in school improvement consists of Instructional Solutions Teams assigned by the Superintendent of Public Instruction (State Superintendent), based on need, to Failing schools. The Solutions Teams are composed of master teachers, fiscal analysts, and curriculum assessment experts. The Solutions Teams are charged with working with school staff to assist in curriculum alignment and to instruct teachers on how to increase the pupils’ academic progress.

Charter schools are held accountable in the original legislation, but neither the process nor the consequences are parallel to those for traditional public schools. If a charter school is designated as "Failing," the ADE is required to notify the charter school’s sponsor immediately. The charter sponsor is required to take action to restore the charter school to acceptable performance—or to revoke the school's charter.3

Recent Developments

The Arizona state legislature and the Arizona State Board of Education (state board) shape school accountability policies. This section will track separately both the state legislature’s modifications to the school accountability statutes and the state board’s policies in order to distinguish the decisions of each policy making body.

In 2002, the state legislature began relinquishing control of the mechanics of the achievement profiles to the state board.4 The state legislature eliminated the statutorily defined performance targets and gave the state board the authority to adopt the formula for the achievement profiles according to a “research based methodology” with some specific parameters. The law requires that the accountability methodology account for the performance of pupils at all achievement levels, pupil mobility, and the distribution of pupil achievement at each school, and also requires that it include longitudinal indicators of academic performance.

The state legislature added three achievement profile classifications—Excelling, Maintaining, and Improving—to supplement the Underperforming and Failing classifications in the original legislation. Also, the legislature maintained the statutory formula for Excelling, the highest achievement profile. The formula maintained the 90
percent threshold for student performance on AIMS and MAP (for elementary schools only). Excelling high schools were required to achieve a Graduation Rate of 90 percent or higher and an Annual Dropout Rate of 6 percent or less.\textsuperscript{5}

In accordance with state statute, the state board adopted Arizona LEARNS in September, 2002, as the formula for the achievement profiles. Under Arizona LEARNS, the achievement profiles are determined according to a compensatory model, and the AIMS performance targets are set according to a sliding scale. The AIMS performance targets can vary by school according to the percentage of students meeting or exceeding the standards in the baseline year. The performance targets for schools with a lower percentage of students meeting the standards in the baseline year are higher than the targets for schools with higher baseline percentages (see Figure 1).

\textbf{Figure 1: Conceptual Relationship Between Academic Growth Targets and Baseline Achievement Levels in Arizona LEARNS}

![Diagram showing the relationship between academic growth targets and baseline achievement levels.](image)

The Measure of Academic Progress (MAP) was a marginal additional indicator to assist those elementary schools scoring just below a threshold to reaching the next highest school classification.

Both mobile and stable students were included in the achievement profile formula, with the scores for stable students weighted twice as much as scores for mobile students.\textsuperscript{6} At the high school level, graduation and annual dropout rate are included, and the performance targets are based on the state averages of both indicators.\textsuperscript{7}
The state legislature also increased the degree of state intervention in local public schools to an unprecedented level. Upon ADE’s evaluation and recommendation, Failing schools could be subject to a public hearing before the state board if the school failed to implement its SIP properly. At the public hearing, the state board has the authority to allow another governmental, nonprofit, or private organization to manage the school. In addition, the authority to develop the SIP template was shifted from the local to the state level. The state board now has the responsibility to determine the components of the SIP.

Also in 2002, the charter school accountability process was brought in line with that of traditional public schools. The legislature modified state statutes to require charter schools to notify parents of a school’s classification and to develop and implement a SIP. If the state board determines that a charter school failed to implement its SIP, the sponsor is required to revoke the school’s charter.\(^8\)

In 2003, the state legislature eliminated the last statutorily defined component of the achievement profile formula and gave the state board the authority to determine the criteria for Excelling schools. Further modifications were as follows: schools were provided an appeal process to dispute the data used in the formula, and the outcome of the appeal can affect a school’s classification; and the achievement profiles were modified to the current classifications of Excelling, Highly Performing, Performing, Underperforming, and Failing to Meet Academic Standards (Failing). The Failing classification is delayed until a school receives three consecutive years of Underperforming classifications, instead of two consecutive years, and until the ADE has confirmed the classification with a site visit.\(^9\)

The state board modified the achievement profile formula for 2003 according to legislative mandates and made more sweeping revisions. The state board:

- Increased the emphasis on the MAP beyond its previous marginal status.
- Introduced thresholds that require schools to meet a minimum percentage of students in the “Exceeds the Standard” category on AIMS to achieve the two highest classifications.
- Weighted test results in favor of a school’s strongest performance trend (either baseline achievement level or amount of progress).
• Removed mobile students from the formula.
• Modified the formula to conform to the NCLB school accountability provisions.\textsuperscript{10, 11}

The passage of the federal No Child Left Behind Act (NCLB) in January, 2002 is another critical development. Although NCLB is not state policy, the sweeping legislation had an impact on school accountability systems in every state beginning in 2003. The NCLB provisions include a federal school accountability system that is substantively different than the state’s accountability system. The NCLB accountability system is based on a conjunctive model (see Table 1).

<table>
<thead>
<tr>
<th>Table 1: Comparison of the Underlying Models Used in the State and Federal Accountability Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State: Arizona LEARNS</strong></td>
</tr>
<tr>
<td>Compensatory model</td>
</tr>
<tr>
<td>The academic indicators counterbalance each other. Higher performance on one academic indicator can make up for lower performance on another indicator.</td>
</tr>
</tbody>
</table>

In contrast to the requirements set forth by Arizona LEARNS, under NCLB, schools must meet \textit{all} of the following criteria in order to make the federal designation of acceptable performance, Adequate Yearly Progress (AYP):

• Test a minimum of 95 percent of enrolled students.
• Meet targeted achievement goals on AIMS for all student subgroups (major racial/ethnic groups, special education, Limited English Proficient, low-income).
• Meet benchmarks on an additional indicator (graduation rate for high schools and attendance rate for elementary schools).\textsuperscript{12}
The targeted achievement goals on AIMS ensure that all students are proficient by 2014.

Under NCLB both schools and districts that do not make AYP are subject to corrective actions. The AYP determinations for schools and districts are published on the Arizona School Report Card. Schools and districts receiving Title I funds that do not meet AYP requirements for two consecutive years are placed in School Improvement status, and schools that remain in this status for two more consecutive years are subject to corrective actions according to a menu of options. The corrective actions become more extensive and intrusive as schools fail to make AYP for multiple consecutive years. For example, the corrective actions range from implementing a new curriculum to replacing school staff.\textsuperscript{13}

**Available Data**

The ADE released the first achievement profiles in the fall of 2002.\textsuperscript{14} The most striking statewide result is the extremely low number of Excelling schools according to the formula defined by state law. These results sparked the 2003 legislative changes that allow the state board to determine the formula for Excelling schools (see Table 2).

<table>
<thead>
<tr>
<th>Achievement Profile</th>
<th>Count</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excelling</td>
<td>3</td>
<td>0.2%</td>
</tr>
<tr>
<td>Improving</td>
<td>446</td>
<td>35.1%</td>
</tr>
<tr>
<td>Maintaining Performance</td>
<td>548</td>
<td>43.1%</td>
</tr>
<tr>
<td>Underperforming</td>
<td>275</td>
<td>21.6%</td>
</tr>
<tr>
<td>Total Schools Receiving Profile</td>
<td>1272</td>
<td>100.0%</td>
</tr>
</tbody>
</table>


The sweeping revisions to the Arizona LEARNS formula adopted by the state board resulted in a dramatic shift in the distribution of the 2003 achievement profiles. In
comparison to the previous year, a notably higher percentage of schools qualified as Excelling and a considerably lower percentage of schools were classified as Underperforming (see Table 3). Overall, 174 fewer schools received an achievement profile than in 2002.\textsuperscript{15} The decline is primarily due to State Board policies that raised the minimum number of students required in the achievement profile calculations, resulting in fewer school calculations.

**Table 3: Achievement Profile Results, All Schools, 2003**

<table>
<thead>
<tr>
<th>Achievement Profile</th>
<th>Count</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excelling</td>
<td>132</td>
<td>12.0%</td>
</tr>
<tr>
<td>Highly Performing</td>
<td>167</td>
<td>15.2%</td>
</tr>
<tr>
<td>Performing</td>
<td>663</td>
<td>60.4%</td>
</tr>
<tr>
<td>Underperforming</td>
<td>136</td>
<td>12.4%</td>
</tr>
<tr>
<td>Total Schools Receiving Profile</td>
<td>1098</td>
<td>100.0%</td>
</tr>
</tbody>
</table>


Arizona traditional public and charter schools submitted 88 appeals in the first year of the process and 11 were granted.\textsuperscript{16}

Presently, there are 82 Arizona public schools that have been designated as Underperforming for two consecutive years. Alternative schools, extremely small schools, new schools, and schools providing instruction for only grades K-2 have not been given an Achievement Profile, but the State board has adopted policies to include most of these schools in the near future.\textsuperscript{17}

According to the NCLB accountability results, 24 percent (404) of Arizona schools and 37 percent (190) of school districts did not make AYP in 2003. Schools had the most difficulty meeting the criterion of testing 95 percent of enrolled students (see Table 4).\textsuperscript{18}
Table 4: Total Number of Schools Not Making AYP by Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total Schools Not Meeting Criteria*</th>
<th>Total Schools Not Meeting This Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Tested</td>
<td>241</td>
<td>139</td>
</tr>
<tr>
<td>AIMS Academic Targets</td>
<td>146</td>
<td>52</td>
</tr>
<tr>
<td>Additional Indicator</td>
<td>131</td>
<td>70</td>
</tr>
</tbody>
</table>

* Schools are counted multiple times if they failed to make AYP on multiple criteria.

Currently, there are 20 Arizona Title I schools subject to corrective actions under NCLB. An additional 100 schools are in their first year of school improvement and 99 schools are in their second year.19

The underlying data for the achievement profiles and AYP determinations are available. AIMS and Stanford 9 test results, as well as annual dropout rate and graduation rate data, are all published on the ADE’s website. The test data are reported at the state level and disaggregated by subject, school, and grade level. The state level graduation and annual dropout rate data also are disaggregated to the school level. The public files, however, are insufficient to recreate the achievement profiles. The formula uses student level data; for confidentiality reasons, these are not released to the public.

The School Report Cards are available online at the ADE’s website, and the achievement profiles are incorporated in national websites targeted toward parents. There also are data available to gauge parental knowledge of the achievement profiles. In a recent statewide survey commissioned by the state board, 57 percent of Arizona parents were knowledgeable about the achievement profile for their oldest child’s school. The report of the survey concludes that the publicity of the achievement profiles is not reaching all parental audiences.20

**Evaluation of Available Data**

As school accountability evolves and the consequences escalate, sound data become an increasingly important means by which to assess the impact of policies. At
this point, school accountability policies and the data are new. This first annual report will introduce the qualities of sound school accountability data, evaluate the state of the data according to these qualities, and introduce three long-term threats to developing sound data. This section will focus on the Arizona LEARNS achievement profiles because the NCLB data are in their first year of implementation.

Data that are “sound” are accurate, valid, and consistent. The accuracy of the achievement profiles’ school classification data depends on the accuracy of the underlying data. The accuracy of state test results can be verified through technical reports and verification procedures conducted by the ADE and outside sources. Recently, however, highly publicized events have led to widespread national criticism of the accuracy of self-reported dropout and graduation statistics.21, 22 There is no research that documents the full extent of inaccuracies in Arizona public school data; there are, however, anecdotal examples of such inaccuracies. As a result, education researchers have issued recommendations to improve the accuracy of school-generated statistics, such as random audits of local data.23

The validity of the achievement profiles presents an important but unanswered question. In this case, validity refers to whether the achievement profiles measure what they intend to represent, namely the academic performance of a school. The implications of data validity are extensive, because schools are publicly identified and subject to corrective actions based on the results. Therefore, it is important that a school identified via the achievement profiles as having poor academic performance is in fact academically deficient. Also, valid data are necessary to identify schools with academic deficiencies in order to target resources for improvement. One strategy to determine if the achievement profile results are valid is to evaluate whether or to what extent they are corroborated by other measures of school quality.

Data must be consistent over time in order to measure change and evaluate the impact of public policies. The achievement profiles have undergone fundamental changes in the first two years of implementation and these changes disrupt the longitudinal consistency of the data. As a result, it may be impossible to interpret changes in the achievement profiles. If a school improves or declines according to the
achievement profiles, the change can be attributed to several equally plausible explanations: improvements at the school level, changes in state testing policies, or revisions in the formula. The inability to narrow the possible explanations limits the extent to which stakeholders can evaluate the impact of Arizona LEARNS. At the school level, data inconsistencies confound the ability of educators to use achievement profile results to make data-driven decisions about curriculum and instruction.

Over time, there are three specific threats to the development of sound data. The first is inaccuracies in the underlying data. Inaccurate test score results, such as the miscues that hampered the early implementation of AIMS, can diminish the quality of the school classification data. Additionally, much of the data is collected at the school level, which requires the ADE to conduct training continually to communicate policy changes and keep pace with staff turnover at the local level.

Second, changes in state laws, policies, or both can introduce further inconsistencies. Any legislative or administrative decisions involving any of the academic indicators can affect the quality of the data. The most obvious example is the state board revisions to the Achievement Profile formula in 2003 that disrupted the longitudinal consistency of the data. Most recently, the state board has approved other changes to testing policies, such as combining the Stanford 9 and AIMS into a dual-purpose test and lowering the AIMS eighth grade cut score. As policy makers consider changes to Arizona’s academic indicators, they must remain mindful of how their decisions affect the achievement profile data. If the alterations are substantial, the data will effectively “start over again” and hinder the ability to evaluate the impact of state policies.

Third, school and district responses to the school accountability provisions can affect the interpretation of the data, and in some cases may invalidate the data. In any accountability environment, the stakes must be high enough to prompt local reaction, and schools and districts will pursue actions to maximize their results on the academic indicators. The ideal response is bolstered curriculum and instructional practices that yield improvements in student achievement.
Local school boards, school districts, or charter operators also make other decisions that on the surface may not appear to affect school accountability data but do have a substantial impact. For example, changes in school boundaries or the reconfiguration of a school can disrupt the longitudinal consistency of the data. Schools may shift how they implement state testing policies, which can alter the composition of the student population tested and confound inferences made from the data, either within a school or between schools. In the extreme, as consequences increase, so does the likelihood of unethical behavior, such as gaming and cheating, to maximize results. These types of unprofessional responses will likely invalidate the data.

**Key Unanswered Policy Questions**

Proposition 301 and NCLB are intended to improve public education. In light of this stated purpose, the key unanswered policy questions are, “In what ways, for whom, and to what extent is public education actually improving in Arizona?”

Proposition 301 lacks a comprehensive evaluation of the accountability policies that could address some of the unanswered questions. Currently, the available data, such as student test scores and graduation rates, are part of the accountability system itself. These are indispensable indices of educational improvement. The use of the same indicators as the sole criteria to measure educational improvement, however, can lead to a narrowing of school priorities and a limited perception of Arizona’s public schools. The three unanswered policy questions are intended to broaden the collective focus to consider issues outside a strict application of school accountability policies.

**To What Extent Does Learning as Evidenced Within the Accountability System Transfer or Generalize to Other Indicators of Learning?**

The generalization of outcomes is important because students should learn a broader set of skills than what is ultimately on state tests, and students should be able to apply their knowledge in settings other than paper and pencil tests. The Arizona academic standards are comprehensive but do not include all of the possible learning outcomes that the public hopes schools teach and students learn. Learning outcomes are
further narrowed because the AIMS and the Stanford 9 tests represent a sample of the academic standards. Therefore, AIMS scores reflect student achievement on a subset of the academic standards, which are themselves a subset of the possible learning outcomes schools might address. For example, the ability to apply mathematics principles and procedures in real-life settings is currently not assessed directly with paper-and-pencil tests in Arizona and some other states. In addition, the state tests use specific types of item formats, mainly multiple-choice, which do not allow students the opportunity to demonstrate the full range of their abilities, such as oral communication skills.

An important policy question involves determining the extent to which the academic achievement indicators included in the accountability system are corroborated by independent measures of student learning not included in the accountability system. This confirmation is critical to assessing the extent to which academic achievement outcomes can be considered learning. One cannot assume that test scores are necessarily synonymous with student learning. The goal of learning is the ability to apply knowledge that is learned in one setting to a different setting. If students have learned, the improvement in AIMS and Stanford 9 scores should be reflected in other measures of students’ learning. Evaluating for broader learning outcomes as measured by other instruments would protect against teachers’ training students to take specific tests rather than teaching to the more general learning objectives.

Evidence of improved student learning beyond the evidence provided by AIMS and Stanford 9 would be reassuring and convincing evidence that education is improving in some broader and more generalized sense. This point of discussion does not challenge the validity of the current assessments or accountability system. More broadly based evidence, some of which might corroborate the gains in AIMS and Stanford 9, would contribute to claims about improvements in public education.

This type of study has been conducted to evaluate state-level, high-stakes graduation test policies using national tests such as ACT and AP scores. Other assessments, such as the National Assessment of Educational Progress (NAEP), could be used to evaluate the extent to which students’ learning is improving beyond the more narrow evidence provided by AIMS and Stanford 9 data. In addition, the independent
measures can expand beyond other tests to include desirable outcomes, such as completing a rigorous high school curriculum, readiness for postsecondary education, and workforce preparation.

**What Are the Unintended Outcomes of School Accountability Policies?**

A comprehensive evaluation of school accountability policies assesses the extent to which the stated goals of the policy have been achieved, and also examine unintended outcomes. The stated goals of accountability policies could be evaluated by analyzing changes in AIMS and Stanford 9 scores, as well as attendance and graduation rates, all of which are highly desirable outcomes. Examining only these desired outcomes and ignoring the systematic study of possible unintended outcomes, however, presents an inadequate picture of the program’s impact and a narrow vision of what “improving public education” might mean.

The evaluation of unintended outcomes is not a “witch hunt” or an attempt to demean a state policy. Rather, it is a routine component of serious scientific program evaluation. An objective evaluation identifies both negative and positive unintended outcomes, assuming they both exist. School accountability policies could have numerous potential unintended outcomes including, but not limited to, an impact on these important aspects of education:

- Student retention and dropout rates.
- Student placement decisions or tracking.
- The depth and breadth of school curricula and course offerings.
- The type of instructional practices used by classroom teachers.
- Teacher morale and behavior.
- Teacher retention and recruitment.

**What Other Public Institutions and Agencies Can Be Held Accountable for Improving Public Education?**

The current accountability program places almost exclusive responsibility for student achievement on the K-12 educational system, specifically schools and educators.
This focus seems obvious and appropriate. Schools, however, are not the sole agent in the education of Arizona’s public school students. The final unanswered policy question leads to a broader consideration of which other public institutions and agencies should be held responsible in a comprehensive educational accountability program.

Local school boards, teacher organizations, district, county, and state agencies are major contributors. Their actions, and inactions, have a meaningful, although not always directly obvious, influence on student learning and the improvement of public education. Lastly, colleges of education, the institutions that prepare new teachers for our schools, have to some extent been exempt from the evaluation of their role in the improvement of K-12 education.

Local school boards are included in school accountability policies through the ballot language requirement. This requirement does not take effect for several years, however, and local school boards continue to interpret and shape policies in the interim. During this time, state and national governing board associations can play an active role in training their members on school accountability requirements.

Teacher organizations can influence their members to support state programs and facilitate the delivery of valuable professional development activities that would help teachers assist their students in meeting the academic standards. Various governmental agencies can likewise look for opportunities, both in terms of financial resources and professional development efforts, to support teachers’ instruction and thereby students’ learning. State requirements for teacher certification, for example, can be reviewed to evaluate the extent to which they are likely to identify teachers highly qualified to assist K-12 students in their efforts to reach state academic standards. Likewise, public colleges are a major source to replenish the existing workforce. In 2002, the public colleges of education graduated a combined total of approximately 2,000 beginning educators to a state teacher workforce of approximately 46,000.27, 28 The alignment of these colleges’ academic program with the state academic standards and accountability requirements can be examined.
It is recommended that:

1. The Arizona legislature expand the scope of school accountability policies to include evaluating the role and impact of local school boards, teacher organizations, colleges of education, and district, county, and state agencies that affect student learning and therefore should be held accountable for improving public education.

2. The Arizona legislature authorize and fund the Arizona Department of Education (ADE) to create an independent evaluation team, composed of personnel who are not responsible for directing and managing the accountability program, to review the accountability system.

3. The Arizona legislature authorize and fund the ADE to develop a comprehensive, systemic, and external evaluation of school accountability policies that includes, but is not limited to, the academic indicators already included in the school accountability system.
Notes and References


2 According to ARS §15-241, the minimum number of schools required to trigger the ballot language is defined as more than two schools in a district and more than one-half of, or in any case more than five, schools in a district.


5 Ibid.

6 Mobile students are defined as students who have attended a school for less than one academic year. Stable students are those who have attended a school for at least one academic year.


13 A list of corrective actions is available online at [http://www.ed.gov](http://www.ed.gov)

14 A list of the 2002 classifications for all schools is available online at [http://www.ade.az.gov](http://www.ade.az.gov)


Technical manuals that detail the formula for each version of Arizona LEARNS and documents from the state board and legislative proceedings are available at the ADE website, (www.ade.az.gov).

The statewide school district totals are inflated because charter schools may be reported as both a school and a district.


The NCLB legislation includes an evaluation component.

