Rating States, Grading Schools

What Parents and Experts say States Should Consider to Make School Accountability Systems Meaningful

Education Commission of the States

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This paper is available online at: www.ecs.org/docs/rating-states,grading-schools.pdf.

Note: American Samoa, Guam, Puerto Rico and the U.S. Virgin Islands are included in the ECS school accountability database, but their numbers are not included in this paper.

EXECUTIVE SUMMARY

Parents and policymakers have long sought to measure the quality of their public schools and to report that publicly in ways that are fair and equitable. In recent years, with a renewed focus on student outcomes, this effort has become a very public and sometimes acrimonious debate.

With this project, ECS sought to answer three key questions from various stakeholders in a way that assists parents and policymakers in creating school accountability systems or "report cards" that are transparent and effective.

The key questions we asked:

- ***Of researchers*** – Are the report cards easy to find?
- ***Of parents*** – Are the report cards easy to understand?
- ***Of experts*** – What indicators are essential for measuring school and district performance?

The responses, in brief:

Researchers agreed upon eight state report cards as easy-to-find, informative and readable. Their top three picks are in bold:

- ***Arizona***
- ***Illinois***
- ***Ohio***
- Delaware
- Kentucky
- Louisiana
- Massachusetts
- Maine

Parents identified six state report cards as the best of the 50 states, based on ease of reading, providing sufficient data and overall usefulness. Their top three picks are in bold:

- ***Delaware***
- ***District of Columbia***
- ***Illinois***
- Arkansas
- Ohio
- Wisconsin

Experts selected five indicators they see as essential for any state's school accountability system:

- ***Student achievement***
- ***Student academic growth***
- ***Achievement gap closure***
- ***Graduation rates***
- ***Postsecondary and career readiness***

The co-authors of this report then reviewed ECS' 50-state accountability database, released in January, and identified 14 states that are both including all five essential indicators in calculating their state school reports and publicly reporting all five indicators. Those 14 states:

- ***California***
- ***Colorado***
- ***Florida***
- ***Kentucky***
- ***Louisiana***
- ***Nevada***
- ***New Mexico***
- ***North Carolina***
- ***Ohio*** *(final element coming in 2015)*
- ***Oklahoma***
- ***Pennsylvania***
- ***Tennessee***
- ***Utah***
- ***Wisconsin***

Interestingly, different states excelled in different aspects considered in this project. At ECS, we believe states can improve their education systems by learning from each other. We hope this report assists in those continuing efforts.

Introduction

State leaders are striving to increase transparency about how well their public schools are educating children. The result is an increase in the information about schools' challenges and successes being shared with their communities through annual reports, often in the form of "report cards." This wave of accountability makes it important — now more than ever — to analyze which measures best signal the quality of schools and how that information is effectively shared and used to improve performance.

Transparency is important but, unlike in years past, it is not itself the end goal. Ultimately, today's accountability systems are designed to hold schools responsible for their contribution to students' postsecondary success and to equip parents with the information they need to insist upon change if they don't believe their children are being well-served. Valid metrics are necessary if policymakers are to implement meaningful school ranking systems and, subsequently, school improvement plans that parents and others can trust.

This report includes input from three different groups in an attempt to help state policymakers create accessible, useful and effective school report cards.

The key questions and responding groups:

1. ***Are the report cards easy to find?***
   Experienced researchers at the Education Commission of the States (ECS) were asked to find selected state report cards online to determine the accessibility of the cards.
2. ***Are they understandable to parents?***
   More than a dozen parents were asked to rate the report cards on a 1-5 scale in the categories of "easy to read," "provides sufficient data" and "useful."
3. ***What are best practices?***
   Finally, a dozen experts convened to discuss the essential metrics for any accountability system, key considerations for policymakers and important decision points.

Accountability Efforts: A National Evolution

State school accountability systems, and their goals, have evolved over the years:

- **Accountability 1.0** (1900–80) – Accreditation: Initially based on inputs such as staff degrees and numbers of library books, this version evolves in the 1980s into a focus on performance.
- **Accountability 2.0** (1990–2001) – Standards-Based Accountability: State lawmakers set academic standards and begin state testing, sometimes with rewards and/or sanctions. Florida launches the first state school report cards, grading schools from A to F.
- **Accountability 3.0** (2001–10) – No Child Left Behind: Federal lawmakers mandate state testing and outline incentives and consequences with an unprecedented level of detail. Parents in some states receive report cards with two sets of ratings, state and federal.
- **Accountability 4.0** (2010–present) – Race to the Top: With the renewal of NCLB stalled in Congress, President Obama entices states to implement reforms, such as linking student test scores to teacher evaluations, with Race to the Top grants.
- **Accountability 5.0** (2013–present) – Standards, Round 2: States adopting standards such as the Common Core are figuring out new assessments and tweaking accountability systems to measure and report results.

Door plates to D's: Common indicators of today's report cards

States have long sought to publicly report school quality but the measures used to determine quality look much different today than they did 100 years ago. As early as 1897, the state of Minnesota enacted a law requiring schools to meet certain minimum requirements to receive state aid. In 1907, Illinois began awarding door plates to schools it deemed "superior." And by 1925, 30 state departments of education were publicly reporting on factors such as the number of teachers with academic and professional qualifications and the frequency of community meetings.[1]

Today, every state annually publishes individual district and school report cards to provide a snapshot of how well that district and school is educating its students. The metrics used vary but the focus has clearly shifted from inputs, such as the number of library books in a school, to outcomes, such as student academic growth on state exams. Door plates have given way to report card rating systems including A-F grades, 1 to 5 stars, numerical index scores, colors such as green for good schools and red for struggling schools, or various descriptors, such as a "continuous improvement" or "reward" school.

Researchers at the Education Commission of the States compiled a 50-state database of what's measured and reported by each state. What's measured and what's reported are not necessarily identical. States may measure various data and use that information in calculating a final letter grade, index score, color or descriptor. But not all data collected by all states is factored into such calculations; some states simply report out additional information for the public to see.

As part of this report, ECS convened a School Accountability Advisory Group to discuss which measures should be included in every state's accountability system. The members, listed in the appendix, identified five essential indications. The indicators, and the states currently measuring and reporting those indicators according to the ECS accountability database, are shown below.

STATES AND THE FIVE ESSENTIAL INDICATORS FOR SCHOOL ACCOUNTABILITY

Data from ECS' 50-state database on school accountability systems show which states are using the indicators:

Indicator Used for School Accountability	No. of States Measuring	No. of States Reporting
Student achievement	50 + Washington, D.C.	50 + D.C.
Student academic growth	42 + D.C.	34 + D.C.
Achievement gap closure	36 + D.C.	39 + D.C.
Graduation rates	50 + D.C.	50 + D.C.
Postsecondary and career readiness	20 (explicit mention; 25 if count proxies for readiness)	13 (30 + D.C. if count proxies for readiness)

Source: Education Commission of the States, http://www.ecs.org/html/educationissues/accountability/stacc_intro.asp.[2]

What's the difference between what's measured and what's reported?
What's measured refers to data that states use in calculating their school performance ratings. What's reported refers to data that states make publicly available but do not necessarily include in those calculations. Twenty-three states include all five essential indicators in measuring school performance: Alabama (2015-16), Alaska, California, Colorado, Florida, Hawaii, Indiana, Kentucky, Louisiana, Minnesota, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, Wisconsin and Wyoming.

What is meant by postsecondary and career readiness indicators or their proxies?
Some states explicitly refer in their accountability laws to postsecondary and career readiness indicators while others use indicators that serve to suggest such readiness, including college-going rates and ACT/SAT results.

Communication and trust: Two factors that matter, but aren't rated

ECS' review of school accountability systems found calculations used by states to reach a school's final grade or rating are rarely simple, often relying on algebraic equations and other mathematical formulas. While this may be necessary to ensure numerous indicators are represented and to create the most accurate ratings, such formulas can be difficult to communicate clearly to the public.

Teachers, parents and communities like to have a basic understanding about how a school's grade was derived. Weights and proportions matter. States can measure carefully selected indicators of quality but if the indicators are weighted incorrectly — at least, according to some observers — the result can be a grade or rating that some members of the public see as inaccurate and, worse, intentionally so.

Trust is an issue. This is not surprising since the results of school ratings can range from accolades to staff firings to closures. Letter grades are easiest for parents and other constituents to understand. But if a clear rating sits atop a hill of measures that communities don't trust, questions are likely to follow.

Where does it go wrong? Here are some common complaints:

- The metrics aren't right. For example, too much emphasis is placed on test performance and/or too few subjects are tested.
- The metrics, weights, measures and formula do not accurately reflect school performance.
- Composite scores are seen as less transparent and nuanced than separate indicators.
- Communication about how the grades are determined is vague or inconsistent.
- Even a rocket scientist can't figure out the formula.
- The metrics, weights, formula and report card do not reflect public values.

Creating a robust, valid and easy-to-understand report card is harder than it sounds. State legislatures and departments of education have worked years to create such report cards — only to be rewarded with a cacophony of criticism from their constituents. The rest of this paper is divided into three sections — researchers, parents and experts — that seek to help state policymakers get it right.

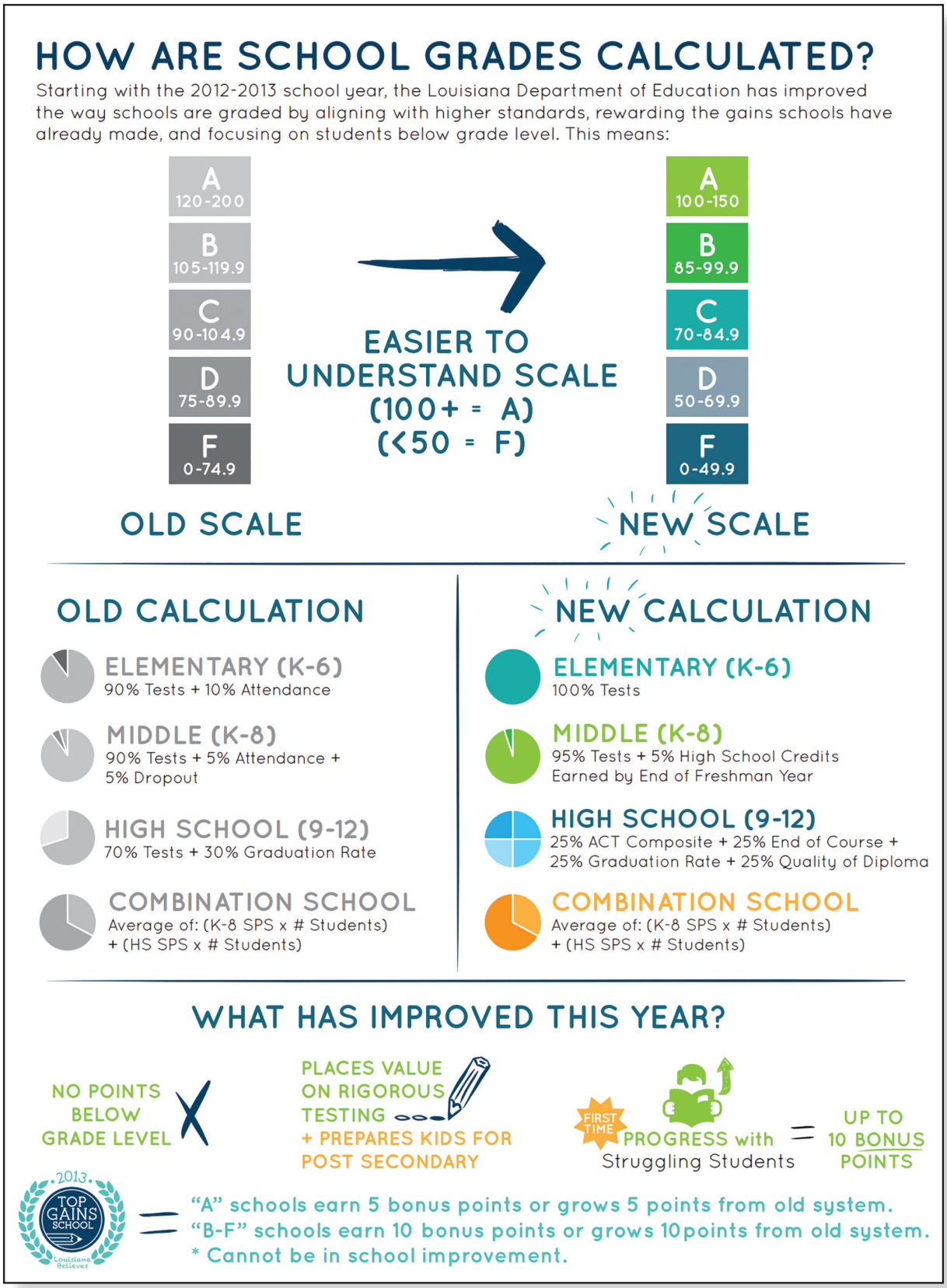
It's complicated: Attempting to overcome "composition bias"

An issue with nearly every performance indicator is composition bias. Simply stated, this refers to the correlation between a school's student demographics and its performance levels. Attempts to resolve this concern have resulted in greater attention to academic growth, rather than absolute performance levels, and a number of more complicated accountability systems.

For example, states may use regression analysis, a statistical process for estimating the relationships among variables, to determine the weight to give poverty. Or a state may use value-added modeling, charting student progress over time, in an attempt to determine teaching contributions to student growth. While these techniques may be used to improve accuracy, they can be difficult to easily explain in communications about accountability systems.

WHAT'S THE SECRET FORMULA? IT HAS TO BE UNDERSTANDABLE!

Examples of easy-to-understand state report card formulas include Louisiana, one of the top states selected by researchers and experts.



Source: http://www.louisianaschools.net/docs/test-results/8-19-13-report-card-infographic.pdf?sfvrsn=6

Section I: Researchers

Are the report cards easy to find?

Researchers with the Education Commission of the States were assigned to find state report cards online in an effort to see how easy the cards are to locate. They were given the name of a particular school in a particular state and asked to find its most recent report card. One goal was to ascertain the level of computer skill required to find the state-issued cards. In many cases, private school-rating websites such as GreatSchools.org, city-data.com or 50Can.org came up first in computer searches, while serious diligence and technical understanding were needed to find the state-sponsored reports.

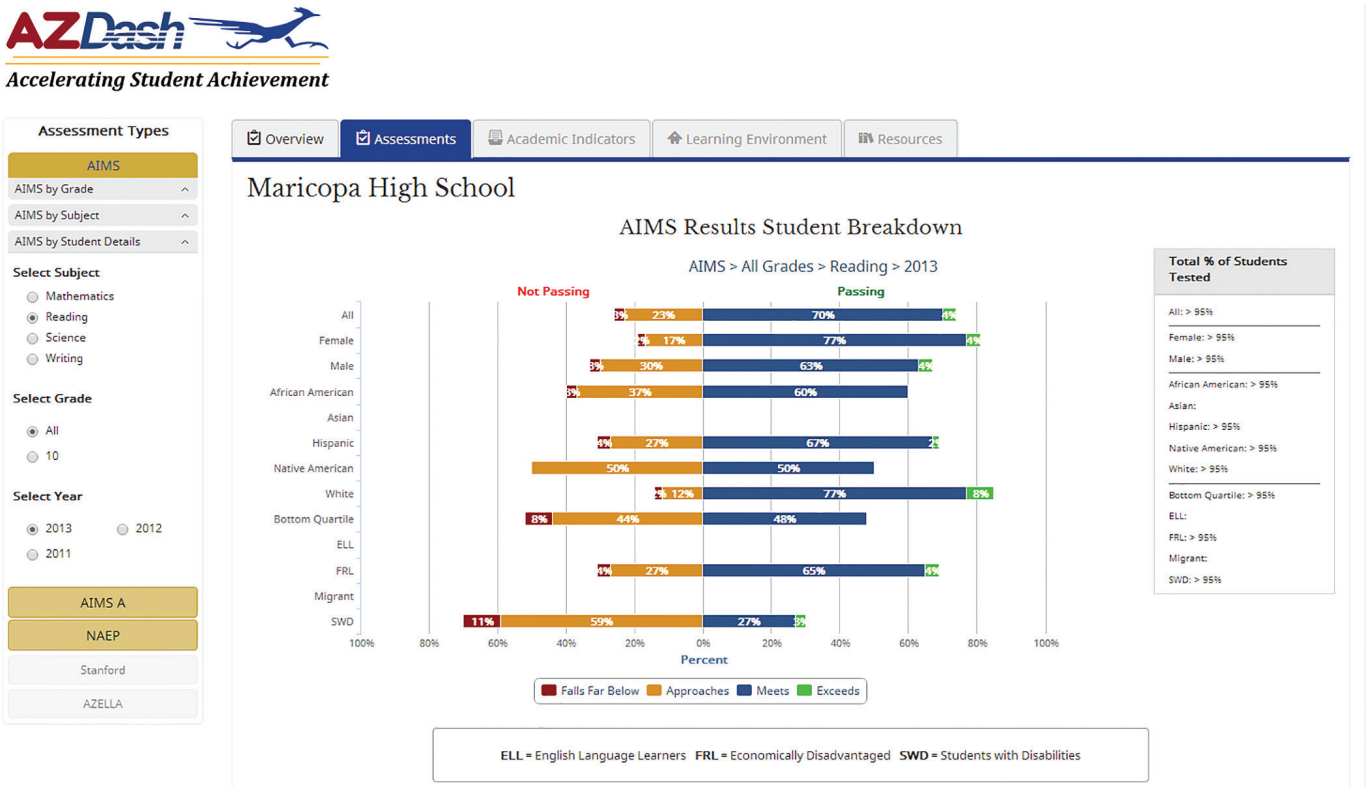
The three researchers were asked to rate each report card from 1 (unsatisfactory) to 3 (excellent) in the following categories: Findable, Readable, Understandable and Graphics. For the latter category, the question was "Were graphics used well to convey the information?" Even those experienced in online research had difficulty: "*I wasn't able to find school-level report cards*," lamented one while another noted, "*Could not find using a Google search – lots of confounding search results*." They identified eight report cards as above average in all categories: Arizona, Delaware, Illinois, Kentucky, Louisiana, Massachusetts, Maine and Ohio. Of those, they agreed Arizona, Illinois and Ohio had overall the best easy-to-find, informative and readable report cards.

Researchers' Ratings: "These States Do It Best!"

Arizona

Summary: This report card received excellent ratings in nearly all categories. It was particularly noted for being easy to find and to understand, though the PDF version of the card was not rated as highly.

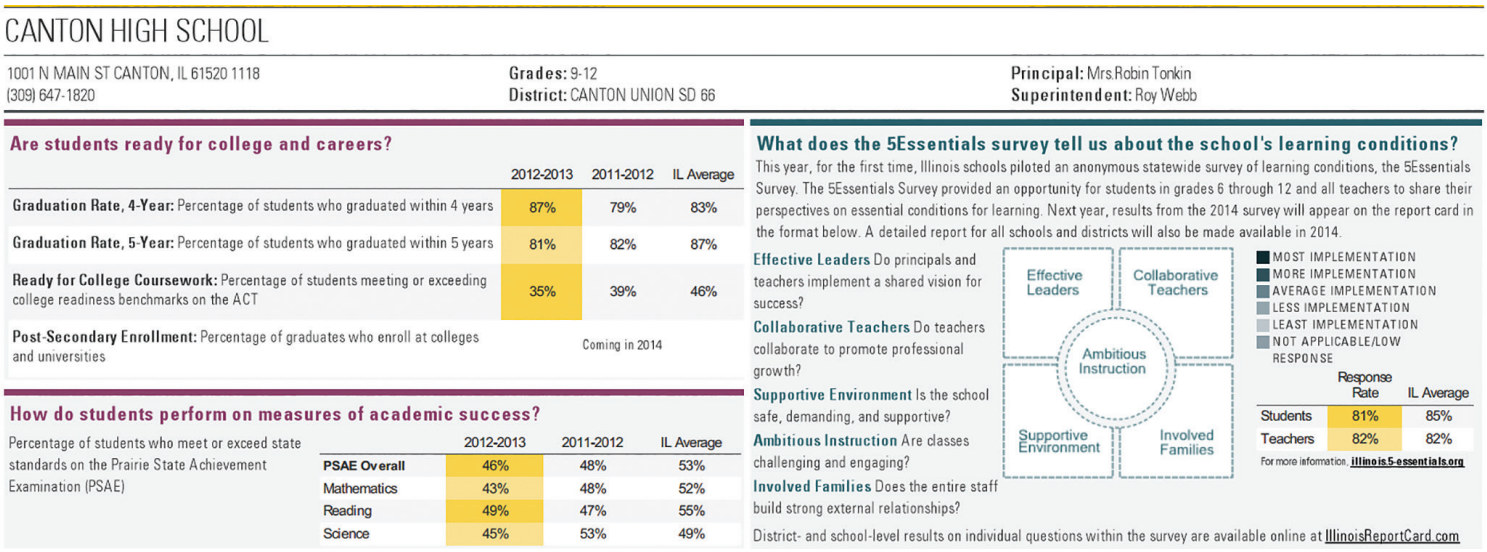
"The simple format is very reader-friendly. All the essential information is present and easy to process … The graphics are well-done and convey information at a glance."



ILLINOIS

Summary: Given top marks in most categories, this report card was particularly noted for being easy to understand and for its use of graphics. Also praised: Links allowing readers to "drill down" to learn more.

"I really like the overview on the first page with the snapshot and basic graphs. It made the basic information very easy to understand and to digest. I also liked how the graphics were interactive."



CANTON HIGH SCHOOL

1001 N MAIN ST CANTON, IL 61520 1118
(309) 647-1820

Grades: 9-12
District: CANTON UNION SD 66

Principal: Mrs Robin Tonkin
Superintendent: Roy Webb

Are students ready for college and careers?

	2012-2013	2011-2012	IL Average
Graduation Rate, 4-Year: Percentage of students who graduated within 4 years	87%	79%	83%
Graduation Rate, 5-Year: Percentage of students who graduated within 5 years	81%	82%	87%
Ready for College Coursework: Percentage of students meeting or exceeding college readiness benchmarks on the ACT	35%	39%	46%
Post-Secondary Enrollment: Percentage of graduates who enroll at colleges and universities	Coming in 2014		

How do students perform on measures of academic success?

Percentage of students who meet or exceed state standards on the Prairie State Achievement Examination (PSAE)

	2012-2013	2011-2012	IL Average
PSAE Overall	46%	48%	53%
Mathematics	43%	48%	52%
Reading	49%	47%	55%
Science	45%	53%	49%

What does the 5Essentials survey tell us about the school's learning conditions?

This year, for the first time, Illinois schools piloted an anonymous statewide survey of learning conditions, the 5Essentials Survey. The 5Essentials Survey provided an opportunity for students in grades 6 through 12 and all teachers to share their perspectives on essential conditions for learning. Next year, results from the 2014 survey will appear on the report card in the format below. A detailed report for all schools and districts will also be made available in 2014.

Effective Leaders Do principals and teachers implement a shared vision for success?

Collaborative Teachers Do teachers collaborate to promote professional growth?

Supportive Environment Is the school safe, demanding, and supportive?

Ambitious Instruction Are classes challenging and engaging?

Involved Families Does the entire staff build strong external relationships?

MOST IMPLEMENTATION
MORE IMPLEMENTATION
AVERAGE IMPLEMENTATION
LESS IMPLEMENTATION
LEAST IMPLEMENTATION
NOT APPLICABLE/LOW RESPONSE

	Response Rate	IL Average
Students	81%	85%
Teachers	82%	82%

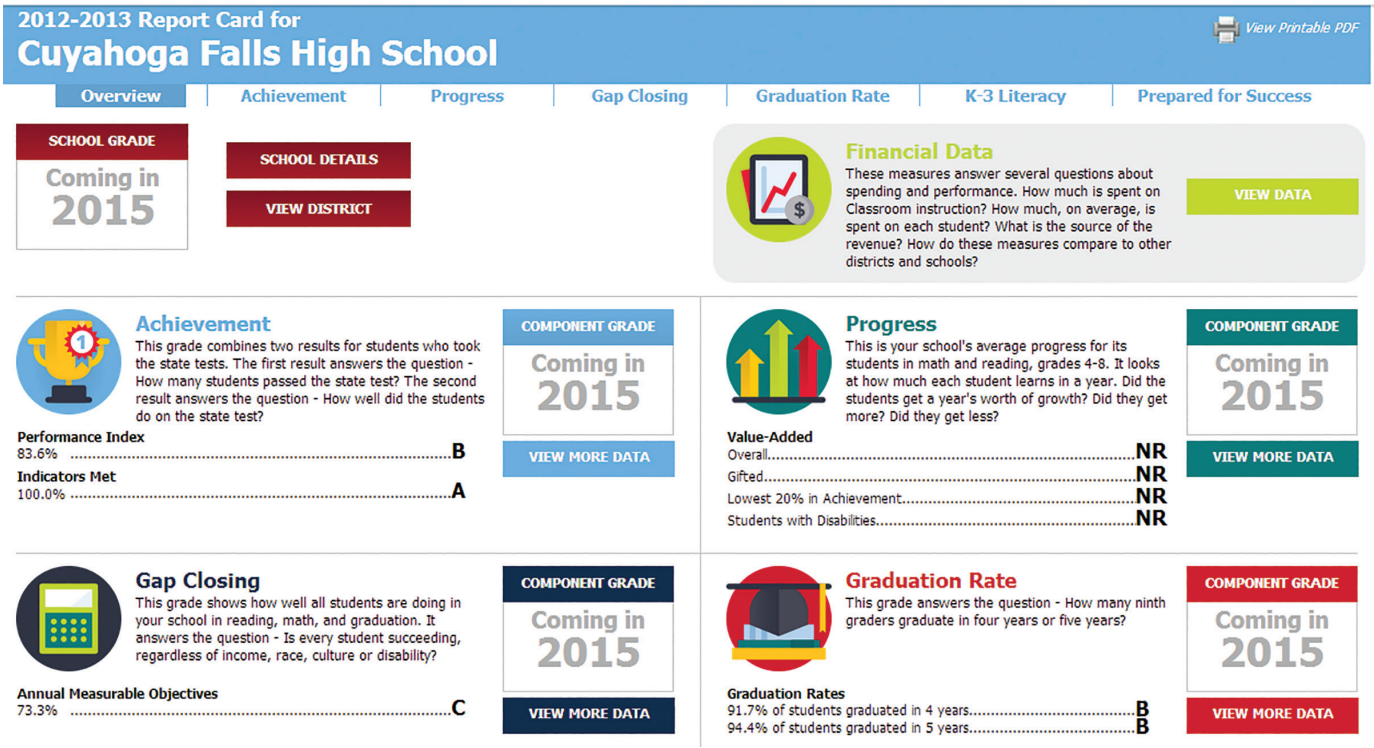
For more information, **illinois.5-essentials.org**

District- and school-level results on individual questions within the survey are available online at IllinoisReportCard.com

OHIO

Summary: Another report card with nearly perfect scores, Ohio's effort was lauded for its graphics and for being easy to read and understand. One concern: Several data points are labeled "Coming in 2015."

"Very well-designed and easy to understand. The graphics are outstanding. I really like the little 'gauge' graphics." The different data points are explained well and concisely."



2012-2013 Report Card for
Cuyahoga Falls High School

View Printable PDF

Overview | Achievement | Progress | Gap Closing | Graduation Rate | K-3 Literacy | Prepared for Success

SCHOOL GRADE
Coming in 2015

SCHOOL DETAILS
VIEW DISTRICT

Financial Data
These measures answer several questions about spending and performance. How much is spent on Classroom instruction? How much, on average, is spent on each student? What is the source of the revenue? How do these measures compare to other districts and schools?

VIEW DATA

Achievement
This grade combines two results for students who took the state tests. The first result answers the question - How many students passed the state test? The second result answers the question - How well did the students do on the state test?

COMPONENT GRADE
Coming in 2015
VIEW MORE DATA

Performance Index
83.6% ..... B
Indicators Met
100.0% ..... A

Progress
This is your school's average progress for its students in math and reading, grades 4-8. It looks at how much each student learns in a year. Did the students get a year's worth of growth? Did they get more? Did they get less?

COMPONENT GRADE
Coming in 2015
VIEW MORE DATA

Value-Added
Overall ..... NR
Gifted ..... NR
Lowest 20% in Achievement ..... NR
Students with Disabilities ..... NR

Gap Closing
This grade shows how well all students are doing in your school in reading, math, and graduation. It answers the question - Is every student succeeding, regardless of income, race, culture or disability?

COMPONENT GRADE
Coming in 2015
VIEW MORE DATA

Annual Measurable Objectives
73.3% C

Graduation Rate
This grade answers the question - How many ninth graders graduate in four years or five years?

COMPONENT GRADE
Coming in 2015
VIEW MORE DATA

Graduation Rates
91.7% of students graduated in 4 years ..... B
94.4% of students graduated in 5 years ..... B

Researcher Review "Likes"

Is the report card easy to find?

"It was relatively easy to find (after minimal digging) and I like that you can download the report."

"The school-specific information did not come up through an Internet search, but found relatively easily through the state education department."

Is the report card easy to read?

"The report card was very good. Easy to read. Not too much information shown, but links to more detailed information were easily accessible."

"I also liked that information was available in Spanish."

Is the report card easy to understand?

"I like that there's a two-page snapshot as well as the more detailed online version. Information was broken down into tabs, which I think is helpful."

"Nice balance of data and narrative explanation. 'For Parents' and 'for Educators' are GREAT features to see."

Does the use of graphics help convey information?

"The graph titles also provide additional information by hovering over the text."

"I really like the overview on the first page with the snapshot and basic graphs. It made the basic information very easy to understand and digest. I also liked how the graphics were interactive and allow users to click through for more details."

Researcher Review "Dislikes"

Is the report card easy to find?

"When I searched for report cards on the Department of Education site, the first link it brought up was broken. It took me nine minutes to get to the accountability reporting system page."

"Found right away with a Google search, but the website doesn't work right with Firefox. Worked fine with MS Explorer."

Is the report card easy to read?

"This report card was clearly not designed with parents in mind. It looks like it's just to meet state/or federal reporting requirements. There's no explanation of the contents and no total score or rating."

"I don't think the format (requires lots of clicks) is user-friendly."

Is the report card easy to understand?

"Oddly, the school's A-F grade doesn't appear on the report. You have to go to the Excel spreadsheet to get the A-F grade. There's information on the web page about how the grades are calculated, but you have to be willing to click and read several different documents."

"I see that the school got a four-star rating, but I don't see any content around that. Four out of what? Five? Ten?"

Does the use of graphics help convey information?

"There are a bunch of nice charts and graphs, but you have to click on each thing separately to see them."

"Nearly unreadable. It was very difficult to understand what was being tracked or scored."

Section II: Parents

Do the report cards contain useful information?

To determine how useful the report cards actually are to parents, ECS asked parents from across the country to follow a link to an individual school report card from each of the 50 states. The 14 parents were selected by ECS staff and represent a mix of educational attainment, ethnicity, income levels and geography, both in terms of urban/rural and in terms of U.S. states. Their children range in age from kindergarten to high school.

Each of the parents reviewed report cards from all 50 states and rated them from 1 (unacceptable) to 5 (excellent) in the categories of "easy to read," "provides sufficient data" and "useful." ECS selected for review a mix of elementary, middle and high schools that were moderately diverse in student population and that received ratings in the moderate to upper range.[3]

Overall, the parents favored report cards with clear graphics that made the data easy to understand. They also liked when additional information was available if a viewer wanted to drill down. However, there was not always consistent agreement. On the same high school report card, for example, one parent labeled the report card as unacceptable in each category while another parent labeled the report card as excellent in all categories.

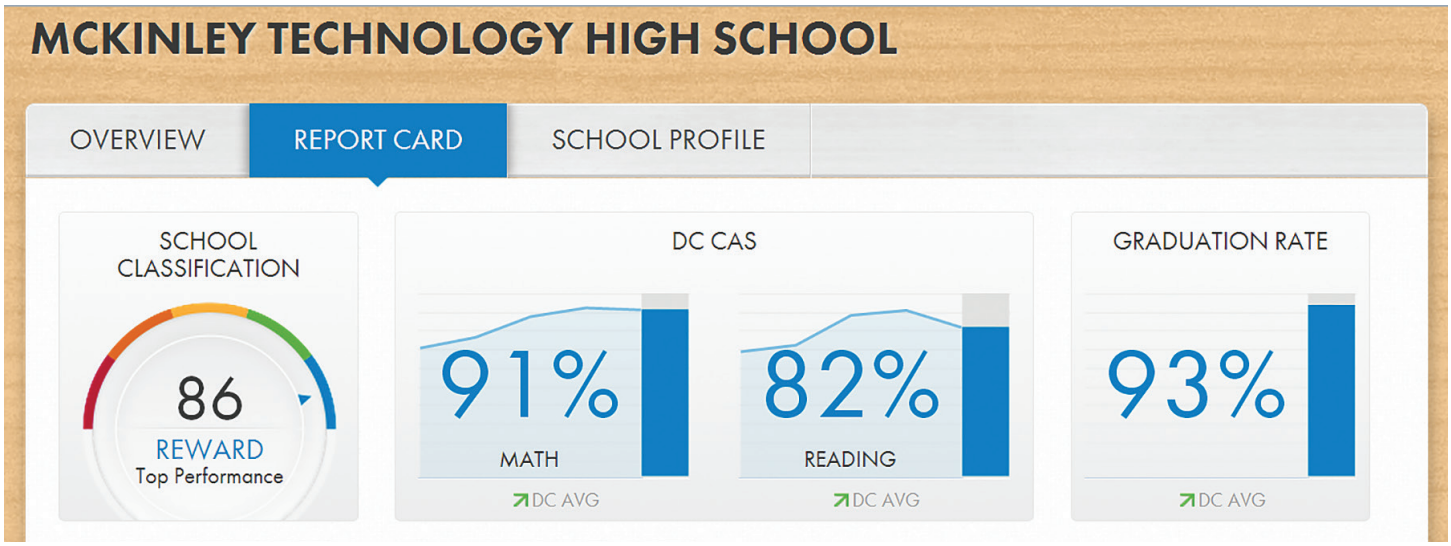
Report cards from Illinois and the District of Columbia were identified as favorites by a majority of parents, or eight of the 14. They were closely followed by Delaware (chosen by six parents) and then Arkansas, Ohio and Wisconsin (each selected by five parents).

Parents Speak: "These States Got It Right!"

DISTRICT OF COLUMBIA

Summary: Parents raved about the "very clear" presentation of information and features such as the ability to compare schools and the option to ask for more data via a readily available email form.

"Wow!! This is one of my favorites. The ability to 'explore' the data is really nice. No other school we looked at had this feature," said one parent while another noted, "I wanted to read it more."



ILLINOIS

Summary: Parents applauded this site for being easy for navigate, noting its clear directions and 'appealing' graphics. They liked the ability to compare schools and to convert information to Excel.

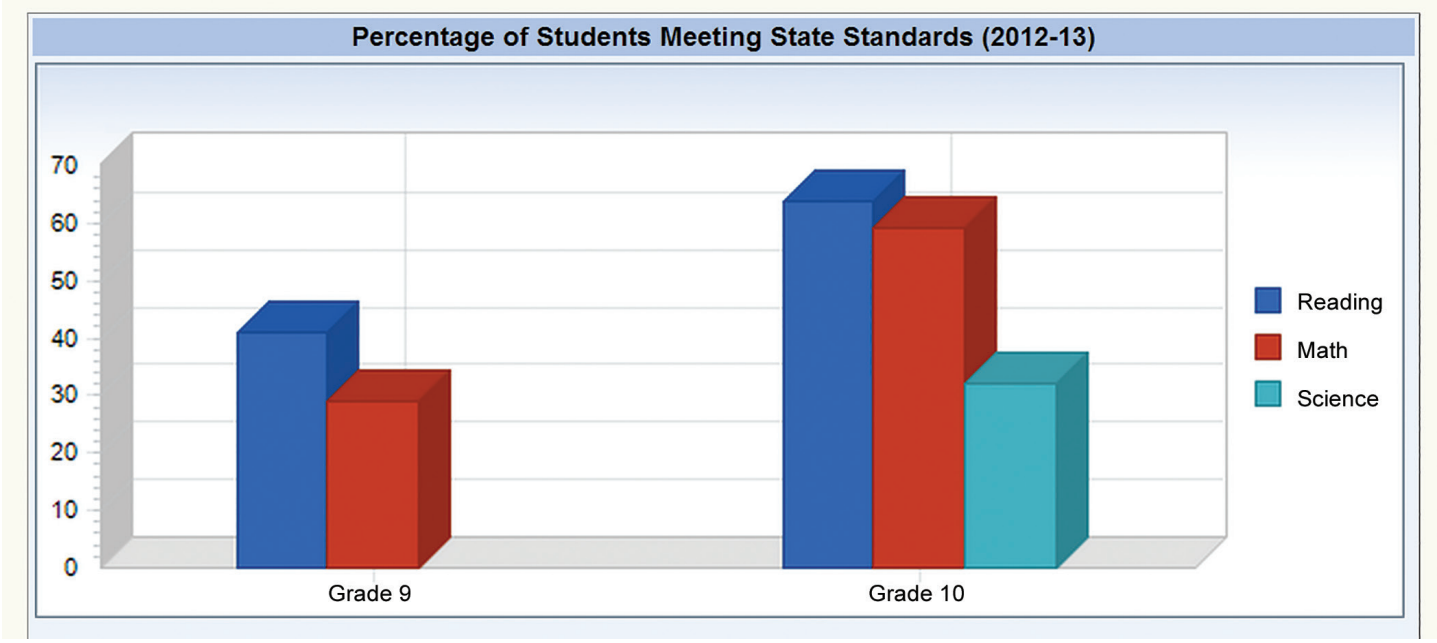
"Fabulous graphics on Fast Facts front page. Also, terrific tech use of 'scan QR code' on the At-A-Glance report," said one parent while another noted "The whole website is really easy to interpret."

Fast Facts About MACARTHUR MIDDLE SCHOOL

DELAWARE

Summary: Parents were enthusiastic about the inclusion of more staff data than other states and the ability to drill down from tabs labeled School, Student and Staff. A common refrain: "User friendly."

"Loved this one – especially the school, teachers, students tabs to help sort out data!" said one parent while another commented, "Nice front-page summary, easy to drill down for more data."



A Clear Winner: Illinois

Illinois was the only state whose school report cards, found easily at: www.illinoisreportcard.com, were selected in the top three by both researchers and parents.

The interactive site is rich with graphics, pop-up explanations and links to at-a-glance reports, videos and additional resources. Indicators are typically accompanied by tabs labeled "Explanation of Display," "Context" and "Resources."

An example is the display regarding student academic growth, a concept that can be tough to explain. Illinois uses a short video to explain the concept, describes how growth fits into the overall performance picture and links to a Frequently Asked Questions document prepared by the state.

Additional comments from parents:

"Easily accessible."

"Easy to navigate."

"Provided directions as to how to navigate the page and was not overwhelming with data."

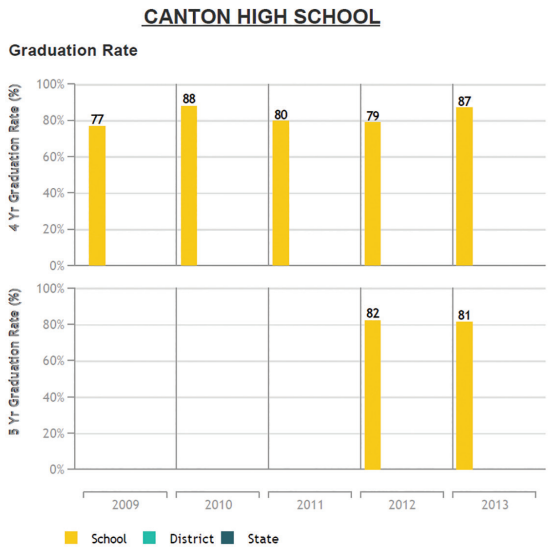
"Had links to compare the school to district & state."

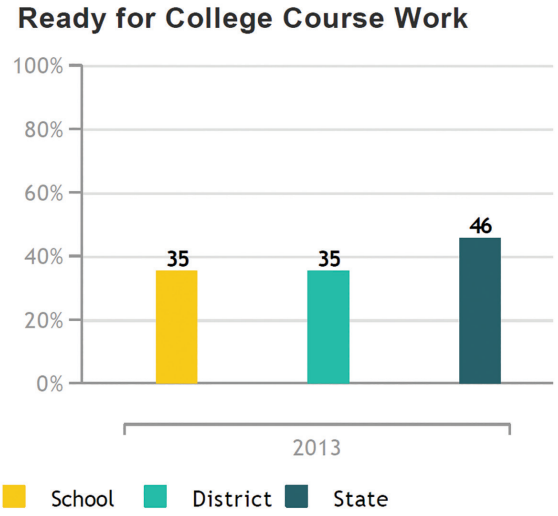
"Very informative."

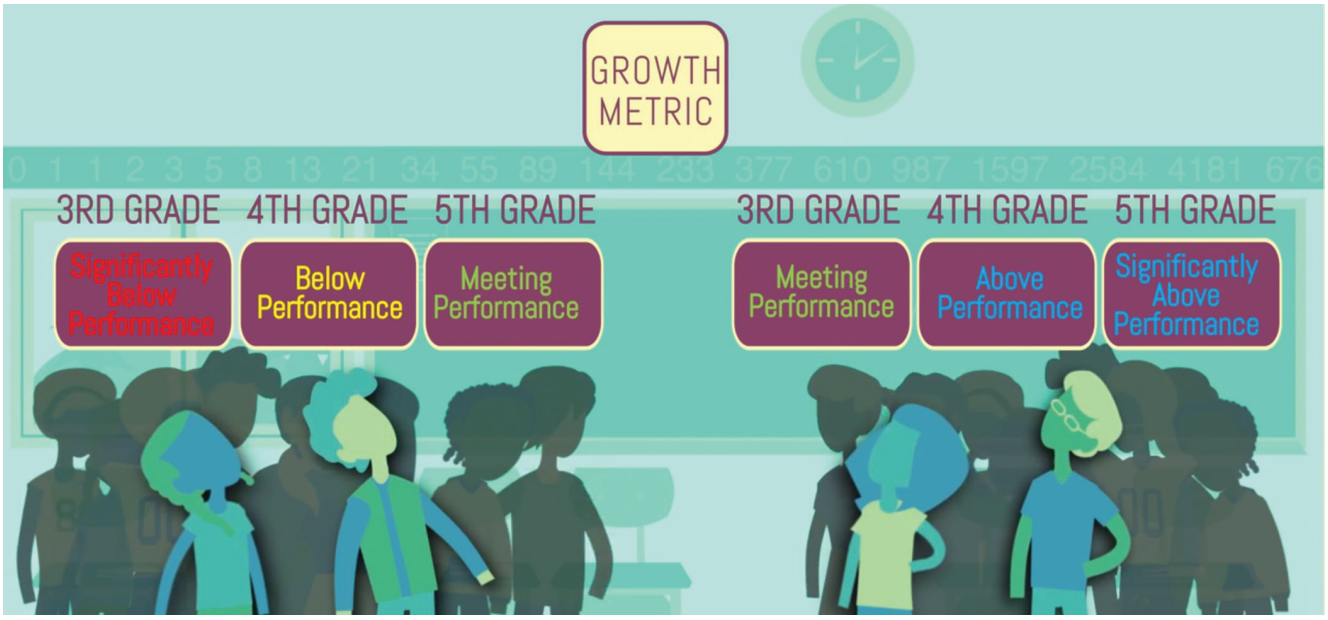
Additional comments from researchers:

"Very good. Easy to read. Not too much information shown, but links to more detailed information were easily accessible."

"THE BEST SO FAR. Easy to interpret, everything is clickable for more information."







Parent Review "Likes"

Is the report card easy to read?
"I like that the data is presented in both table and bar graph format. Four-color bar graph easy to decipher at a glance."
"Everything is on one page. You can get additional information from just one click on the graph and the breakdown of data pops up. The information is very clearly presented."
"Tabs across top make navigation quick."
Does the report card provide sufficient data?
"As a parent, I could find information that would be important to me when making decisions about schools. I felt like I got an understanding of the school without going there from what is on this site."
"I could learn about more than just data about the schools from this site."
"Very thorough – WOW! Could be a bit much to some but I'm sure most parents would love more information than less."
Is the report card useful?
"Additional information such as school safety, graduation rates, etc., help to paint a whole picture of this school."
"Great summary/comparison to the state – demonstrating this school outperforms state average."
"Postsecondary and workforce readiness category is nice to know."

Parent Review "Dislikes"

Is the report card easy to read?
"This report made the user have to use dropdown boxes and select what you wanted to see. Not easy to compare everything like charts and spreadsheets/graphs."
"They use words that are not meaningful to the general public (Cell Count, etc.)."
"+/- I really liked this report card although it is not supported for tablet or smartphone."
Does the report card provide sufficient data?
"So much emphasis on enrollment in the past 10 years, but not much information on performance or assessment."
"Not much reference or explanation of the 'B' grade in the upper right-hand corner. Amount of data insufficient."
"No growth comparisons from years past. Data is very limited."
Is the report card useful?
"Extremely boring and data in tables not clearly labeled or explained."
"Nice summary, but very little info. Would not be good if you were moving to area and wanted more school info. Where is the rest of the data?"
"Like reading a corporate financial report of 20 pages to get information. Lot of data that is scattered and not formatted to be easily understood."

An important consideration

Overall, parent reactions to the report cards broke down into a fairly even distribution — a third of the cards rose to the top, a third sank to the bottom and a third landed somewhere in the middle. Individual reactions to some state's accountability reports, however, were widely disparate. A sampling of those opinions is presented here to further illustrate how difficult it can be to create public reporting systems that please everyone:

One card, different responses: A matter of preference

While many of the scores reported by the parent panel were in the same range, there were definite differences of opinion.

ALASKA

PRO – "Performance index was easy to read and provides a good feel for each school's performance" and "Good data, easy to read!"

CON – "One 96-page document with one page for each school in Alaska. Rates three subjects and just gives percent proficient, not levels or what percentages were in previous years. No demographic or teacher data included. … What is a good score?"

VERMONT

PRO – "You have a lot of control in building the type of reports you want to view. If you know exactly what you are looking for, this is a useful website."

CON – "Vague, would like to see a grade in the district – A, B, C."

Section III: Experts

Essential metrics states should use to measure school success

Because of the complexities involved with selecting school measures that accurately and reliably signal the quality and health of schools, ECS convened a panel of 12 experts in December 2013 to look at what states measure and what they should report regarding the quality and health of their schools.[4] The robust discussion covered the maturation of state accountability and report card efforts, and the pitfalls facing states when the measures become political liabilities. The experts pinpointed essential metrics, caveats, key considerations and important policymaker decision points.

The ECS School Accountability Advisory Group grappled with many questions, including:

- Is more information necessarily better?
- Do metrics and formulas accurately measure which schools are doing well?
- What level of data is necessary? Student-level or cohort-level?
- Is there an absolute level on an indicator below which no school should operate?
- Do you weigh progress toward a goal or an absolute measure?
- Since you cannot account for everything, what are the best metrics for examining the health of a school or system?
- How do you ensure growth toward a goal is recognized while not losing focus on reaching the goal?

Key Findings:

1. Set a clear goal or "North Star"

The expert group noted that states need a clear goal or "North Star" of what they are trying to accomplish with renewed school improvement efforts.

For example, Kentucky lists its "College or career ready for all" goal with their formula and on the state landing page for its school report cards.

Or, if a state such as Massachusetts wants to focus on a P-20 system, measures should signal success throughout that system. That might mean inclusion of a pre-K indicator. Creating a common goal for the state encourages public buy-in and a cohesive message.

When choosing the indicators or metrics to measure school performance, experts say it is important to link the causes, interventions and reliable outcomes that will lead to achieving the overall goal or "North Star."

2. Beware unintended consequences

Prior to delving into essential indicators for states, the experts' panel discussed over-arching concerns about accountability. A major theme was that states and districts must be careful in how they hold schools accountable and how the information is reported to the public. That's because what is measured and reported has the possibility of driving bad behaviors.

For example, grading a school based on the number of expulsions may have the unintended consequence of encouraging teachers and administrators to be more lenient on behavioral infractions.

3. Ensure state systems can handle the data

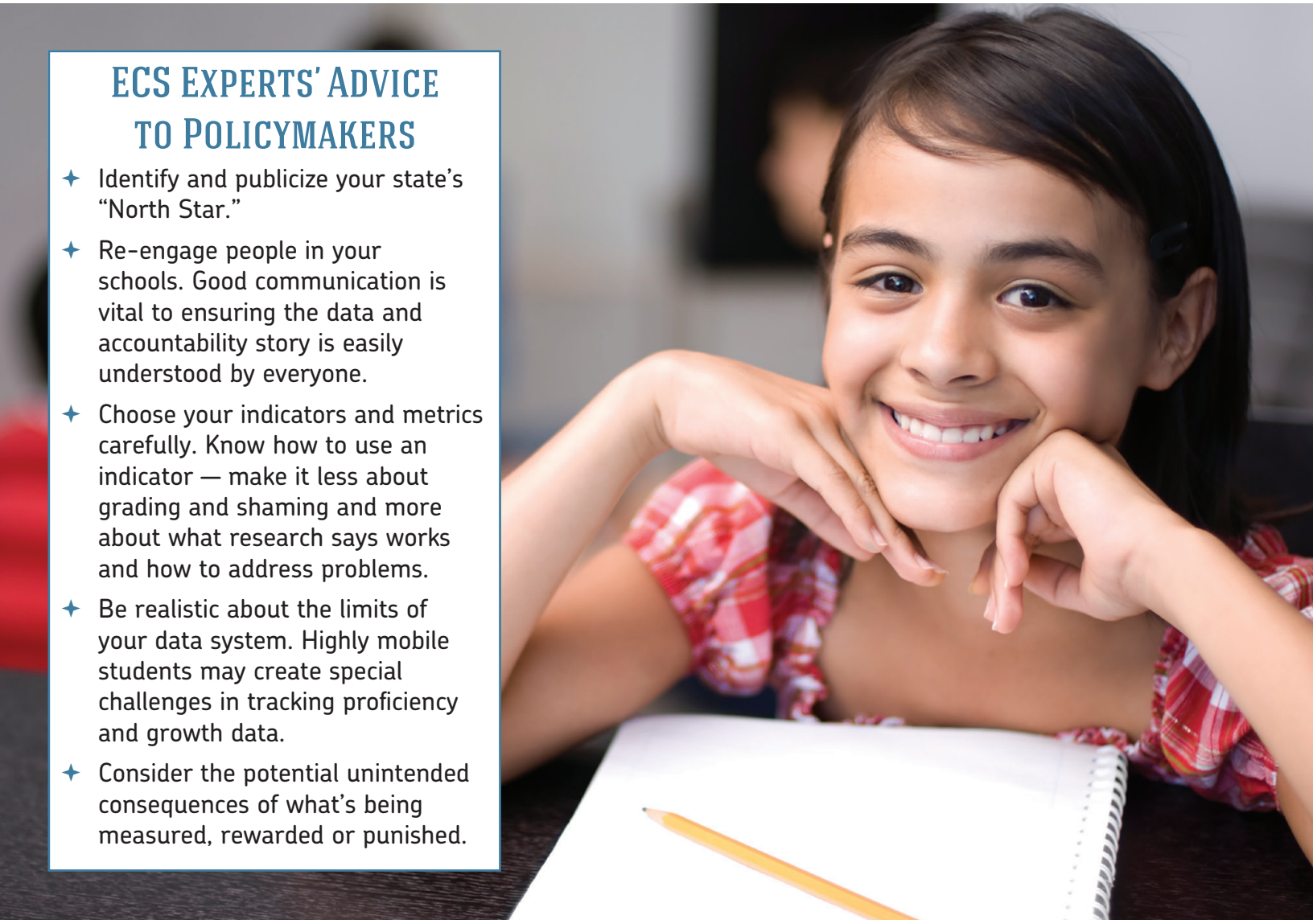
Because the most accurate accountability systems typically require a reliable student-level data system, the experts noted policymakers must consider the capacity of their state longitudinal data system and staff when choosing metrics. Many state data systems were initially created to track school-level accountability data and weren't designed to capture student-level data in a secure and shareable manner. Portability of data across schools, districts and platforms is critical for understanding the growth students are making, but existing state data systems may not be up to the task.

Five essential indicators every state should measure and report

While the experts encouraged additional metrics based on individual state and district issues, they recommended every state report card include these indicators:

- **Student achievement**
- **Student academic growth**
- **Achievement gap closure**
- **Graduation rates**
- **College and career readiness**

For each indicator, the experts examined the various metrics used, advantages, caveats and key state decision points. Detailed findings for each indicator are listed on the following pages.[5]



ECS Experts' Advice to Policymakers

- Identify and publicize your state's "North Star."
- Re-engage people in your schools. Good communication is vital to ensuring the data and accountability story is easily understood by everyone.
- Choose your indicators and metrics carefully. Know how to use an indicator — make it less about grading and shaming and more about what research says works and how to address problems.
- Be realistic about the limits of your data system. Highly mobile students may create special challenges in tracking proficiency and growth data.
- Consider the potential unintended consequences of what's being measured, rewarded or punished.

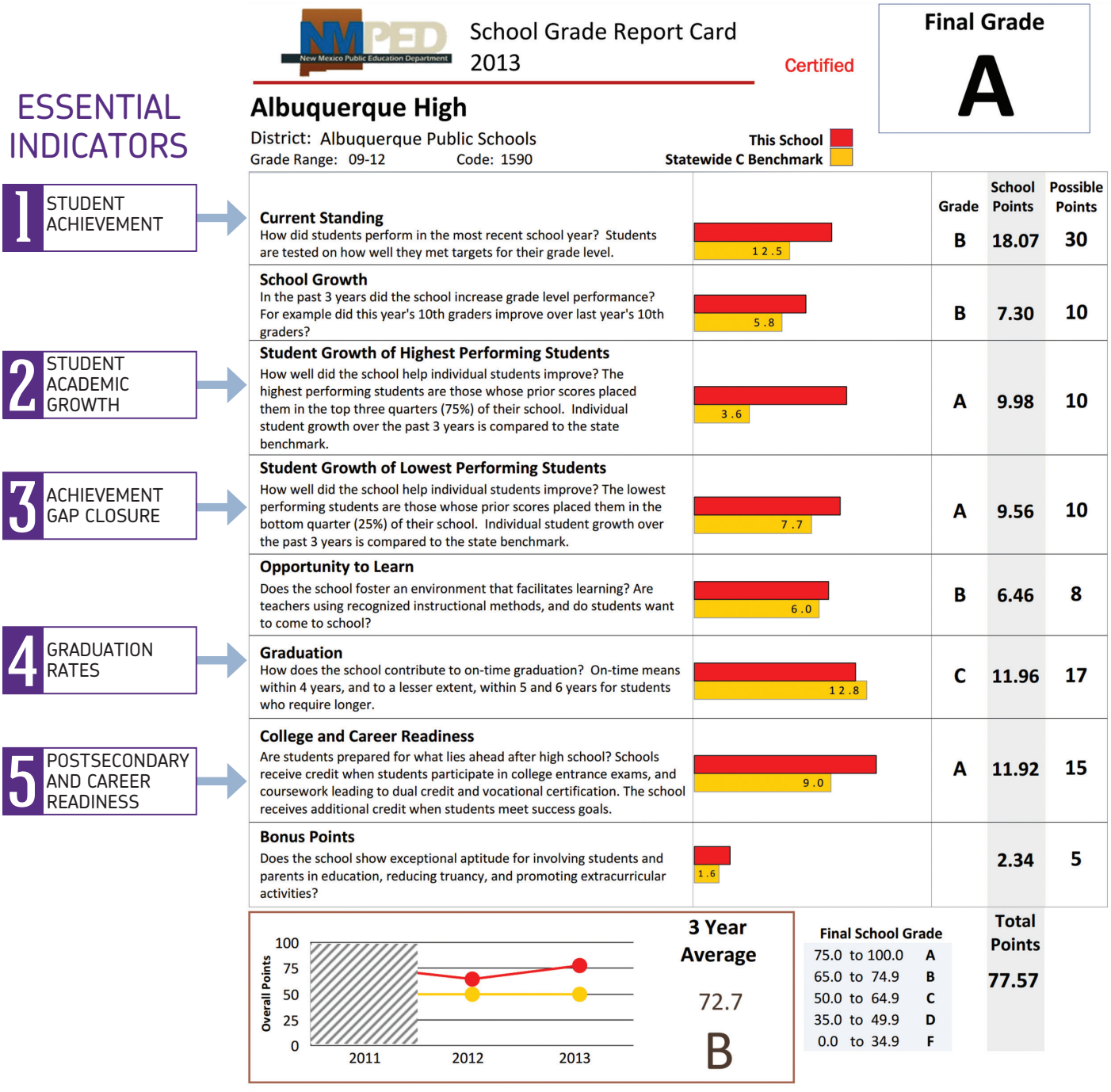
Making the Grade: States Meeting the Five Essential Indicators

The experts convened by ECS did not focus on how to find state report cards or, once found, how to navigate them. Their charge was different: Identify the essential metrics for any accountability system.

So it may not be surprising that there is little cross-over between the top states picked by parents and researchers and those states identified as measuring and reporting on the five essential indicators.

The 14 states identified as meeting the experts' criteria are California, Colorado, Florida, Kentucky, Louisiana, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Tennessee, Utah and Wisconsin.

This example of a New Mexico state report card for Albuquerque High School illustrates the use of the five essential indicators:



School Grade Report Card 2013

Certified

Final Grade: A

ESSENTIAL INDICATORS

Albuquerque High

District: Albuquerque Public Schools
Grade Range: 09-12 Code: 1590

This School
Statewide C Benchmark

		Grade	School Points	Possible Points
1 STUDENT ACHIEVEMENT	**Current Standing** How did students perform in the most recent school year? Students are tested on how well they met targets for their grade level.	B	18.07	30
	School Growth In the past 3 years did the school increase grade level performance? For example did this year's 10th graders improve over last year's 10th graders?	B	7.30	10
2 STUDENT ACADEMIC GROWTH	**Student Growth of Highest Performing Students** How well did the school help individual students improve? The highest performing students are those whose prior scores placed them in the top three quarters (75%) of their school. Individual student growth over the past 3 years is compared to the state benchmark.	A	9.98	10
3 ACHIEVEMENT GAP CLOSURE	**Student Growth of Lowest Performing Students** How well did the school help individual students improve? The lowest performing students are those whose prior scores placed them in the bottom quarter (25%) of their school. Individual student growth over the past 3 years is compared to the state benchmark.	A	9.56	10
	Opportunity to Learn Does the school foster an environment that facilitates learning? Are teachers using recognized instructional methods, and do students want to come to school?	B	6.46	8
4 GRADUATION RATES	**Graduation** How does the school contribute to on-time graduation? On-time means within 4 years, and to a lesser extent, within 5 and 6 years for students who require longer.	C	11.96	17
5 POSTSECONDARY AND CAREER READINESS	**College and Career Readiness** Are students prepared for what lies ahead after high school? Schools receive credit when students participate in college entrance exams, and coursework leading to dual credit and vocational certification. The school receives additional credit when students meet success goals.	A	11.92	15
	Bonus Points Does the school show exceptional aptitude for involving students and parents in education, reducing truancy, and promoting extracurricular activities?		2.34	5

3 Year Average
72.7
B

Final School Grade		Total Points
75.0 to 100.0	A	77.57
65.0 to 74.9	B	
50.0 to 64.9	C	
35.0 to 49.9	D	
0.0 to 34.9	F	

Source: http://webapp2.ped.state.nm.us/SchoolData/docs/1213/SchoolGrading/001_590_ALBUQUERQUE_PUBLIC_SCHOOLS_ALBUQUERQUE_HIGH_SchoolGrading_2013.pdf

Essential Indicator #1: Student Achievement

Every state gives students standards-based assessments and reports those results to schools and parents. States choose the subjects to be tested and set the cut scores necessary for students to show proficiency. Reporting overall or absolute levels of student achievement typically indicates the number or percentage of a school's students who are deemed to be performing proficiently in particular subjects. Many states have defined proficient as achieving grade-level expectations.

But many students come to schools with significant disadvantages. Some states, such as Tennessee, seek to accommodate for such disadvantages with statistical models. These models attempt to reduce the likelihood that schools serving large numbers of disadvantaged students will have their performance designation affected by conditions over which they have little control.

Including absolute levels of student achievement as an indicator in an accountability system is typically seen as an advantage for schools serving more affluent populations. To balance that concern, many states include changes in school achievement levels over time in their ratings formulas and some include student academic growth measures. In addition, a number of states have created comparisons among schools of similar demographics. California, for example, ranks its schools statewide and compares each school to another 100 schools with similar rates of poverty, parent education and other indicators.

Factors for Policymakers to Consider:

- Critics believe a focus on test scores may create a "high-stakes" environment for students, teachers and administrators.
- Communities may have a hard time rallying behind the tests without alignment between the tests, grade levels and learning requirements.
- Setting the cut scores for proficiency on the tests is not a perfect science.
- If tests change, school accountability systems should too. When moving to a new assessment, states should carefully align the old and new tests to validate that the standards are being met.

Questions for Policymakers to Consider:

- Which subjects will be tested and in which grades?
- Do the tests fully align to the standards and do they meet college- and career-ready expectations?
- How are the cut scores for the assessments determined? Who makes those decisions and how often will the cut scores be re-examined?
- Will the results for groups of students, such as English language learners, minorities or low-income students, be explicitly reported as part of the accountability system? Will these results factor in a school's final ranking or grade?
- Does the accountability system consider trend data, such as the past two or three years, or is it based on one year's results?
- Will end-of-course exams or other assessments, such as college entrance tests including the ACT or SAT, be included in the school and district rating system?

Essential Indicator #2: Student Academic Growth

A small but increasing number of states are refining their accountability systems to measure and reward student academic growth. Based on a review of students' test score gains from previous grades, researchers can predict the amount of growth those students are likely to make in a given year and then compare to actual performance. This differs from changes in school-level performance over time because actual individual student performance is tracked, even as students move in and out of schools.

This prediction can help determine whether a student is making expected progress in a particular subject. Measuring student academic growth is one way of analyzing test data to measure teaching and learning. It's often referred to as "value-added" or looking to see whether a teacher has added value to a student's body of knowledge.

In addition, measuring student academic growth and using past growth to predict future results can be used as part of "catch up" or "keep up" indicators. The "catch up" indicator examines the progress of lower-performing students who need to catch up to the performance of their peers. The "keep up" indicator looks at the growth of the highest-performing students, who may stagnate if growth isn't recognized as a priority.

Measuring and reporting student academic growth is generally seen as a way of resolving concerns about composition bias and of recognizing schools and districts that are working hard, even if their results fall short of absolute performance goals.

Factors for Policymakers to Consider:

- "Growth" is often perceived as being too confusing — people may not understand it because the underlying statistical calculations are complex and not easily replicated by non-statisticians.
- Communication strategies for explaining growth are critically important. It is possible to keep the explanations simple, even if the methodology is complex.
- Because simple growth models depend largely on the formula determining individual student growth, it is possible to game the system and make the data look better than it actually is. Calculations should address students who switch schools midyear, those who start or finish a course outside of the normal academic calendar, who have missing data or those who are far below or above grade level for their cohort.
- Attempting to control for student demographics may increase the precision of results in models that don't use all available prior achievement data, but it might have the effect of implying there are different standards for different students.

Questions for Policymakers to Consider:

- Will growth be measured against an absolute proficiency standard or against "peer" schools with similar demographics?
- How can growth calculations keep from working against or accommodate for high-performing schools with less room for growth? Does your state rating formula ensure that achievement growth within the highest-performing quartile also matters?
- Will student academic growth be considered in evaluating teacher performance? If so, does the system used for determining growth align with what's needed to measure teacher performance?

Essential Indicator #3: Achievement Gap Closure

Gaps in achievement separating groups of students by income and ethnicity have been the focus of numerous studies, policy innovation and public concern for many years. Researchers have identified a variety of factors that appear related to these achievement gaps, including family income, parent education levels, access to high-quality preschool, peer influences, curricular and instructional quality, and teacher expectations.

Many states have chosen to focus on these particular achievement gaps as a means of ensuring progress — or a lack thereof — is highlighted. Equally as important, however, are indicators that focus on achievement gaps such as those between English language learners and native English speakers, students performing in the lowest quartile versus those performing better, male students and female students, and so on. In short, the intent of reporting and/or measuring achievement gaps should be to ensure that all students are being served.

It's also important to consider the size of the groupings used in this analysis. For example, the performance of all boys versus all girls in a school may not be useful. But a further breakdown by academic subject and grade may yield more helpful data.

Factors for Policymakers to Consider:

- While challenging, experts agree it is important to measure and report disparities in performance levels among different groups of students.
- Closing achievement gaps should benefit all students – accelerating the growth of lower performers without reducing growth in higher achievers.
- In addition to subgroups based on student demographics, consider subgroups based solely on achievement. For example, closing gaps between historically struggling and higher-performing readers in a grade level or school.
- Decisions surrounding determination of subgroup size matter. Subgroup size can enhance fairness but the use of "super subgroups" — such as grouping all ethnicities under the term minority versus breakdowns by individual ethnicity — may risk covering up low performance by smaller subgroups.
- Federal regulations governing the reporting of assessment results for minimum sample sizes, to avoid releasing personally identifiable information, should be consulted.

Questions for Policymakers to Consider:

- Which achievement measures will be used — test scores, graduation rates, growth, etc.?
- Which subgroups should be included and which excluded — by income, race, achievement level, etc.?
- Are achievement gaps measured within schools and within districts?
- Are multiple years of data used for school performance measures?
- Should performance measures specifically target academic growth of the lowest quartile by giving that group additional weight in the accountability formula?
- How can unintended consequences of subgroup size be accommodated in small, rural schools?

Essential Indicator #4: Graduation Rates

Measuring graduation rates is intended to encourage all schools to ensure all students complete requirements to receive a diploma. The credential, which data has long demonstrated results in better employment prospects and higher pay, can have a profound impact on student life outcomes.

The U.S. Department of Education's required calculation for a school's four-year graduation rate is to divide the number of students graduating in four years with a regular high school diploma by the number of students who entered the school as freshmen four years previously. This calculation is adjusted to account for student movement in and out of the school during the four-year period.

A graduation rate would seem to be a fairly easy metric on its face. Yet it offers a myriad of complexities when considering how to encourage schools to serve students who might "count" against them, such as those who have left school and returned or who have been slow to accumulate enough credits to graduate. For example, how does a state consider students who take five or six years to graduate? Such decisions can have a significant influence on the effort schools put forth in educating at-risk students.

Factors for Policymakers to Consider:

- Allowing credit for five-year and six-year graduation rates, in addition to the four-year rate, could encourage schools to work with struggling students.
- Alternately, does allowing credit for five-year and six-year graduation rates reduce pressure to help students reach credential completion within four years?
- Because graduation requirements differ in states, with some requiring end-of-course exams versus credit accumulation, accurate cross-state comparisons are difficult.
- Managing student mobility data requires a strong longitudinal data tracking system.
- Even with common calculations, schools have the potential to "game the system" by being selective about which students are included in a four-year graduation rate.

Questions for Policymakers to Consider:

- Should five-year and six-year graduation rates be included in the state accountability system to encourage schools to work with struggling students?
- Will a school's graduation rate be measured against an absolute goal, such as 100 percent, or a state average when determining a grade or score for the report card?
- Similarly, should a school's graduation rate be compared against demographically similar or "peer" schools, all schools or perhaps both?
- Will trend data, such as three years' worth of graduation rates, be used to determine if progress is being made?
- Consider potential loopholes schools might use to improve their ratings, such as excluding some students, and figure out how to close them.
- Is there a minimum graduation rate below which a school would fall into the lowest performance category?

Essential Indicator #5: Postsecondary and Career Readiness

While many states are working to define postsecondary and career readiness, the ECS School Accountability Advisory Panel defined it as when a student can perform college level-work without the need for remediation. Often, the more explicit definition in terms of metrics is provided at the state level. An indicator of career readiness creates the need for clarity in defining what career-ready looks like.

These indicators of postsecondary and career readiness were commonly used by states:

- Dual enrollment participation and/or completion
- Advanced Placement participation and/or results
- ACT/SAT participation and/or results
- International Baccalaureate program participation
- College-going rate
- Percentage of students taking algebra in grade 8
- Industry certifications earned
- Percentage of students enrolled in postsecondary programs
- Percentage of students assessed as needing college remediation

Factors for Policymakers to Consider:

- No single formula or definition guarantees freshman-year college success.
- States must increase the dialogue between all aspects of K-12 and postsecondary education to create an aligned P-20 system. Each part of the system provides a necessary building-block for postsecondary success or workforce readiness. Those blocks must be aligned for individual college- and career-readiness measures.
- Measures related to dual enrollment should recognize that dual enrollment may be limited by student location or availability of online courses. Additionally, whether students take part in dual enrollment may be limited by counseling availability and teacher support.
- When including courses and tests that students select into, such as Advanced Placement, ACT and SAT, include both the course or test-taking and the course or test-passing rates.
- Including Advanced Placement participation and results in an accountability formula bring into question the availability of courses offered in person and online and test cut scores.
- Determining whether students entered college ready to perform college-level work requires a relatively stable student population and a strong longitudinal data tracking system.

Questions for Policymakers to Consider:

- What other metrics might be considered to measure postsecondary or career readiness? Is the data capability available to measure those?
- Which advanced offerings, such as Advanced Placement, International Baccalaureate or dual enrollment courses, are available to all students?
- Does the state have the longitudinal student-level data necessary to determine if students are successful in postsecondary education and/or the workforce?
- Do the state metrics accurately tell the story of whether K-12 students are attending college without the need for remediation?

Conclusion

For more than a century, states have created different ways of reporting on the quality of their public schools. It's only in the last 30 years, however, that the reporting has shifted from inputs to outcomes and to how well children are being served. This is a dramatic change and one that likely will continue to evolve.

Increased public reporting about school performance has prompted concerns about the fairness of comparing schools serving different populations. Many states have sought to address this issue by compensating for poverty, which is linked to many out-of-school factors affecting achievement, in some way in their district and school rating systems. Often, this has sparked criticism that expectations are lower for different groups of students. Balancing fairness for all schools and rigor for all students is widely viewed as a challenge in creating accountability systems.

The findings of the ECS School Accountability Advisory Group, the results from researchers and the survey of parents make it clear that communication of a state's overarching goal for schools is imperative. To what end are schools being graded? Schools have long served, and continue to serve, as community centers. Accountability systems impacting schools carry the potential for disrupting communities. For a state school and district rating system to be most effective, students, parents, teachers, administrators, policymakers, employers and community members must understand the state's goal and what their schools are doing — or not doing — to achieve it.

Is your state's "North Star" ensuring college and career readiness for all? Is it graduating students with 21st century skills? Is it serving the whole child? Is it reducing the gap between high-achieving and low-achieving students and providing opportunities for all students? Is it providing an accurate picture of school quality — or the lack thereof?

As states continue with their efforts, some may need to re-evaluate their ratings systems and make necessary course corrections to reach their goals. State leaders should consider whether the public reports are providing increased transparency and serving the needs of parents and communities. A perfect metric, accountability formula or school report card does not exist. There is always room for improvement and the accountability landscape will continue to evolve. The key is to determine which metrics will drive the desired outcomes and whether measuring, reporting, incentivizing or leveling sanctions will best move the state closer to its goal.

Appendix

Members of the ECS School Accountability Advisory Group

The Education Commission of the States convened its School Accountability Advisory Group on Dec. 12-13, 2013 in Denver. Members are the following:

- *Facilitator - Christopher Cross*
  Chairman of Cross & Joftus, LLC and an ECS 2014 Distinguished Senior Fellow
- *Jean-Claude Brizard*
  President, UpSpring Education and former Chief Executive Officer, Chicago Public Schools
- *Sandy Kress*
  Partner, Akin, Gump, Straus, Hauer & Feld, LLP
- *Eric Lerum*
  Vice President for National Policy, Students First
- *Patricia Levesque*
  Chief Executive Officer, Foundation for Excellence in Education
- *Aaron Pallas*
  Professor of Sociology and Education, Teachers College Columbia University
- *Paul Reville*
  Professor of Educational Policy and Administration, Harvard Graduate School of Education
- *Joan Sullivan*
  Chief Executive Officer, Partnership for Los Angeles Schools
- *Philip "Uri" Treisman*
  Executive Director, Charles A. Dana Center at the University of Texas, Austin
- *John White*
  Director, SAS EVAAS for K-12, SAS Institute
- *Priscilla Wohlstetter*
  Senior Research Fellow, Consortium for Policy Research in Education

Endnotes

1. *Education in the States: Nationwide Development since 1990*, Jim B and Edgar Fuller (editors), Pearson (Author), National Education Association (Publisher), 1969.
2. Data notes for this graph:
   - Determinations were based on statutory requirements, although we also reviewed state-requested waivers to the No Child Left Behind Act. Reconciling the two made it difficult to maintain accurate counts.
   - Achievement gap elements reflect state statutory language explicitly targeting closing achievement gaps or explicit targeting of the lowest-performing quartile or English Language Learners.
   - Some states explicitly measure college and/or career readiness (and measure via proxies such as ACT/SAT scores, dual enrollment, college-going rate, industry certifications) while others might simply measure and/or report on the proxies of readiness.
3. Education Commission of the States' School Accountability Parent Panel reviewed state school report cards between Jan. 20 and Feb. 10, 2014. For parent feedback, ECS selected a mix of elementary, middle and high schools that were moderately diverse in student population and received ratings that were in the moderate to upper range. This resulted in a total of 700 report card reviews - 14 parents, each reviewing 50 state school report cards = 700 report card reviews.
4. The ECS School Accountability Advisory Group met Dec. 12-13, 2013 in Denver. Members of the group are identified by name and title in an appendix to this report. The group was facilitated by Christopher Cross, chairman of Cross & Joftus, LLC, and an ECS 2014 Distinguished Senior Fellow.
5. Gillian Locke, Joe Ableidinger, Bryan C. Hassel and Sharon Kebschull Barrett, *Virtual Schools: Assessing Progress and Accountability, A Final Report of Study Findings* (Washington D.C.: National Charter School Resource Center at American Institutes for Research, February 2014), http://www.charterschoolcenter.org/sites/default/files/Virtual%20Schools%20Accountability%20Report.pdf.

Below are links where you can find school accountability reports for each state.

Alabama	Idaho	Minnesota	North Dakota	Vermont
Alaska	Illinois	Mississippi	Ohio	Virginia
Arizona	Indiana	Missouri	Oklahoma	Washington
Arkansas	Iowa	Montana	Oregon	West Virginia
California	Kansas	Nebraska	Pennsylvania	Wisconsin
Colorado	Kentucky	Nevada	Rhode Island	Wyoming
Connecticut	Louisiana	New Hampshire	South Carolina	Washington D.C.
Delaware	Maine	New Jersey	South Dakota	American Samoa
Florida	Maryland	New Mexico	Tennessee	Guam
Georgia	Massachusetts	New York	Texas	Puerto Rico (Spanish)
Hawaii	Michigan	North Carolina	Utah	U.S. Virgin Islands

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"Williams: Texas Will Get A-F School Rating System"
Associated Press, April 2, 2013
"Oklahoma House Passes Bill Changing A-F Grading System"
The Oklahoman, March 5, 2013
"Grades for Utah Schools Expected to Stir Controversy"
Deseret News, Aug. 27, 2013
"Some Michigan School Leaders Criticize New Scorecards that Give Few Schools High Ratings"
Detroit Free Press, Aug. 20, 2013
"Maine Public Schools To Be Assigned Letter Grades: Democratic Legislators, School Officials Cry Foul Over Gov. Paul Lepage's Education Initiative"
Portland Press Herald, April 27, 2013
"Georgia About to Roll Out New Grading System for Schools and Districts"
The Atlanta Journal-Constitution, April 4, 2013
"Schools Get Taste of Own Medicine: States Assign A-F Grades"
Wall Street Journal, Jan. 9, 2013
EXIT