

MEANINGFUL MEASUREMENT

The Role of Assessments in Improving High School Education in the Twenty-First Century

June 2009



ALLIANCE FOR
EXCELLENT EDUCATION

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Suggested citation:

L. M. Pinkus, ed., *Meaningful Measurement: The Role of Assessments in Improving High School Education in the Twenty-First Century* (Washington, DC: Alliance for Excellent Education, 2009).

Ordering information:

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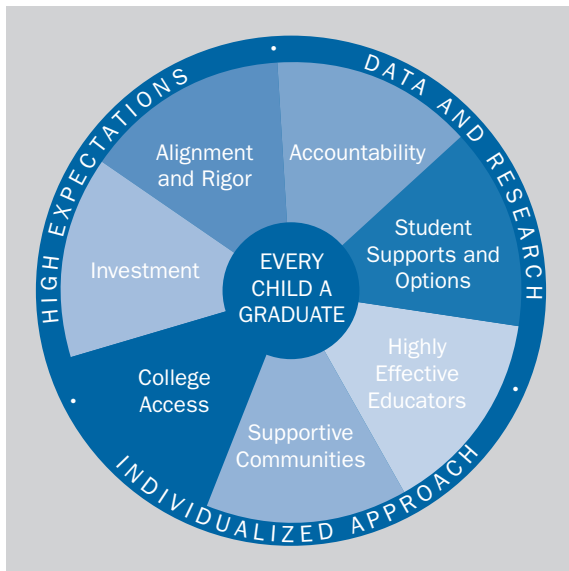
About the Alliance for Excellent Education

The mission of the Alliance for Excellent Education is to promote high school transformation to make it possible for every child to graduate prepared for postsecondary learning and success in life.

The Alliance for Excellent Education is a national policy and advocacy organization, based in Washington, DC, working to improve national and federal policy so that all students can achieve at high academic levels and graduate high school ready for college, careers, and citizenship in the twenty-first century.

The Alliance has developed a “Framework for Action to Improve Secondary Schools” that informs a set of federal policy recommendations based on the growing consensus of researchers, practitioners, and advocates about the challenges and solutions for improving secondary student learning.

The framework, shown graphically here, encompasses seven policy areas that represent key leverage points in ensuring a comprehensive, systematic approach to improving secondary education. The framework also captures



three guiding principles that apply to all of the policy areas. Although the appropriate federal role varies from one issue area to another, they are all critically important to reducing dropouts and increasing college and career readiness.

About the Editor

Lyndsay M. Pinkus is director of strategic initiatives at the Alliance for Excellent Education. Since joining the Alliance in January 2002, she has served in a variety of research, coordination, and advocacy roles, where her work has included managing policy and grant work on a range of issues including graduation rates, data, secondary school accountability, and secondary school improvement, and authoring a number of publications for the Alliance. Prior to rejoining the staff in January 2006, Ms. Pinkus served as a legislative associate at Washington Partners, LLC, providing government relations and policy research and analysis for a variety of clients, including the Alliance. She is a graduate of the School of Public Affairs at American University as a presidential scholar; the Public Affairs and Advocacy Institute at the Center for Congressional and Presidential Studies; and the Institute for Educational Leadership's Education Policy Fellowship program.

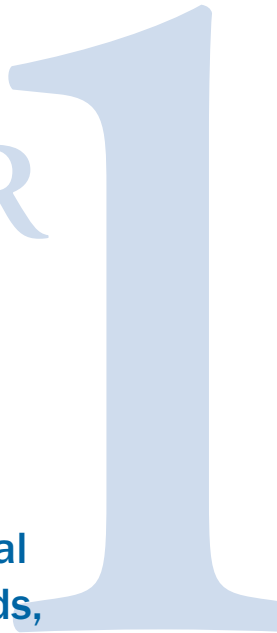
Acknowledgments

The Alliance for Excellent Education is greatly appreciative of the authors for sharing their time and expertise in writing the following chapters, as well as of the multiple Alliance staff members and advisors whose dedication contributed significantly to this volume.

The Alliance for Excellent Education is also grateful to Carnegie Corporation of New York for the financial support that made this publication possible.

The views expressed in this volume are those of the authors and do not necessarily represent those of the Alliance for Excellent Education or the funder.

CHAPTER



College and Work Readiness as a Goal of High Schools: The Role of Standards, Assessments, and Accountability

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Much has been made lately of the idea represented by the phrase “college and work ready” as a goal of the educational system. The purpose of this chapter is twofold: to give policymakers a perspective on the subject through the eyes of those tasked with the standards, assessment, and accountability work, and to provide information for policymaking so the system can produce the intended result. First and foremost, the goal assumed in this chapter is that it is the responsibility of high schools to produce college- and work-ready students, and that our systems of standards, measures, and accountability must support that effort. This chapter will begin with this notion, and then describe the systems that need to be in place to support the goal.

The College- and Work-Ready Student

Research has clearly identified college readiness as containing academic elements related to the ability to succeed in college courses, but also the capacity to tackle the culture, intellectual norms, and social environment of

the college setting.¹ ACT research suggests that preparing students for the worlds of work and college requires a range of factors other than academic ones—so-called “habits of mind”—including traits like persistence, cooperation, and teamwork.² Thus the concept of college and workplace readiness contains both academic and nonacademic elements, and the absence of either set diminishes the ability of students to succeed beyond high school.

In addition to this, standards that are representative of college readiness must go beyond typical academic content, since some amount of skill and knowledge in a particular domain is not enough; what is needed in all cases is the *right* skills and knowledge. For example, the ability to write expository, descriptive, and persuasive text and to perform effective research is necessary for college success, since students will be required to use those skills in almost every postsecondary course they take.³ But proficiency in these areas is not always measured before graduation. Within the core academic subjects—which research suggests should include English, math, science, social studies, world languages, and the arts—only English and math are currently part of every state’s standard set.

The Next Generation of Standards

If standards are to support the current notions of what it means to be ready for college and work, they must do far more than simply articulate expectations in reading, writing, and math. Without the inclusion of elements from other academic and nonacademic areas, the definition of readiness is incomplete. Along those same lines, there really is no such thing as college- and work-ready English language arts standards, or college- and work-ready mathematics standards; instead, both are part of a larger, more complete definition of readiness.

For policymakers, this means that while it is fine to mandate academic standards in core content areas, doing *only* this falls short of describing what college and work readiness really looks like. Standards that do not incorporate habits of mind, various work attitudes, and motivation are not educating students to be college and workplace ready with any degree of reliability.

It should be noted that, as of this writing, an effort is under way for states to come together as a first step toward generating standards that meet some of these “next-generation” criteria. Led by two of the leading state education advocacy groups, the Council of Chief State School Officers and the National Governors Association, the project seeks to produce standards in English language arts and mathematics—referred to as the “common core”—that states could voluntarily adopt as part of their regularly occurring revision cycles. In the process of determining what should make up that core, there has been much focus on notions of college and workplace readiness.

While this is an extremely important and exciting development, work remains to be done. While English language arts and math are indeed critical elements of any definition of post-high school success, they are only two of the domain areas identified as necessary for *college* success, and students’ habits of mind need to be addressed as well. The common core activity should be treated as a critical first step and be offered full support, but other steps will need to be taken as well.

It is crucial that the common core effort remain a state-led and voluntary activity. Federal policy could certainly promote adoption of the common core standards and encourage collaboration among states in other ways, but states have expressed great interest in this work precisely because it is something they are choosing to do, not something they are required to do. As a result, the chances for successful implementation are much higher, and states will be able to retain their traditional role with regard to education.

Measuring College and Work Readiness

The tendency with reading, writing, and mathematics assessment, which occurs in virtually every state, is to pick a score on each test that signifies that students at or above that level are “ready” for college and the workplace. This may seem perfectly logical, but there are several reasons why it fails to accomplish its goal.

1. The scores on traditional tests (other than writing tests that ask students to respond to a prompt) are derived from test items that generally come from the lower end of the standards, meaning that

success on the tests is not the same as the level of achievement needed to succeed beyond school. That is, the tested content tends to come from the material in the standards that can be easily tested, which often does not include the skills and competencies that are necessary for college and workplace success. Success on tests that assess the “wrong” portion of the standards when it comes to success beyond school does not equate with success on the “right” portion of the standards, even if the passing score is set extremely high.

2. Tests given in states are usually limited to a few core content areas. Even if they consisted of a new generation of measures capable of addressing the full range of the standards, they would still not assess important content domains and nonacademic elements. Any declaration of college and work readiness from only a portion of the requirement risks a very high probability of being wrong, either in failing to identify students who may be closer to readiness than the existing data elements suggest, or in implying that students are ready when in fact they fall short on other measures. Such misidentification is even more probable when the tests, as indicated above, do not directly measure what is required.
3. As long as no measurement exists for nonacademic aspects, no declaration of complete success against the goal of college or work readiness is valid; any such declaration can be made only against the full range of requirements. Certainly, students should not be expected to meet all the criteria in exactly the same way, but knowing how prepared they are increases the likelihood that resources can be correctly deployed for those who need more support.

The Next Generation of Measures

If the measures are to have relevance in terms of the goal of college and workplace readiness, the academic measures must change, not just to incorporate the full range of the standards, but to focus on the issues that really matter to the definition. If this does not happen—and if the measures continue to be drawn from the lower end of the standards—then no amount of success on those measures can be said to equal eventual college or workplace success.

This is more than simply covering the full range of the standards in the test. Consider the way that cut scores work. When a student takes a test and answers 70 percent of the items correctly, he or she will generally have answered correctly the easiest 70 percent (with, of course, some anomalies). On a test that covers the full range of a set of standards, it is likely that the passing score occurs somewhere below the realistic threshold for everything students need to know and be able to do in that domain area to succeed beyond school. On current tests, even a perfect score may fail to reflect many of those things that are most important, because they were not included on the test.

When it comes to nonacademic elements of success—such as intellectual openness, inquisitiveness, analysis, reasoning, argumentation and proof, interpretation, precision and accuracy, and problem solving⁴—measurement needs to fundamentally change. Research has proved that these “soft skills” are imperative to the success of students beyond school.⁵ In saying this, one runs the risk of being accused of dumbing down existing standards, but nothing could be farther from the truth. As Lauren Resnick, a well-known researcher and longtime standards advocate, said some time back, “The common idea that we can teach thinking without a solid foundation of knowledge must be abandoned. So must the idea that we can teach knowledge without engaging students in thinking.”⁶

But assessing these habits of mind accurately is quite another matter. The generation of measures that policymakers need to support in the name of college and workplace readiness will have to take on a very different form than current ones. The assessments may continue to involve the use of domain-based tests—improved, of course, from the current versions—but they also must include measures that show students being aware of and developing the habits of mind that provide them with a complete portfolio of what is necessary for life after high school.

Consider, however, that an assessment of “intellectual openness” would be quite silly if it were done using traditional testing practices. However, all of the elements listed above are behaviors that can become part of a student’s repertoire if inserted properly into the educative process. And assessing those behaviors is doable. Consider a theoretical system, implemented in addition

to traditional accountability testing, that students managed themselves in the course of their education. This could be online, and arranged in a format similar to Facebook or MySpace accounts. Ideally, it would

- assess the domain knowledge necessary for success in college and work by asking students to complete online tasks and activities that directly measure the skills and abilities identified as important;
- include scores from accountability testing to show whether scores on tasks and other activities are reasonable and within the realm of expectation given other performances;
- include observations from teachers and other adults with regard to traits that cannot be easily assessed via traditional measures; observations would be against established rubrics and require multiple observations from multiple teachers to be considered valid, and the purpose would be to always help the student grow and progress;
- give students the opportunity to manage their work in terms of their own desires and goals; and
- give school counselors and administrators sufficient access to support and encourage students in a meaningful way with regard to their goals.

Policymakers could encourage this new type of assessment system through targeted research and development (R&D) that focuses on identifying goals and outcomes rather than just the means. An R&D approach is the right one, because technology is changing so quickly that there is a risk of creating an overly bureaucratic system that might fail the audiences it is attempting to serve. The right system would encourage the use of innovation, open sourcing, and social networking, all in the name of encouraging and supporting education in a particular direction. In this sense, the system should not be “federal” or expected to function dynamically, but rather should follow a similar pattern as the common core, wherein states lead and adopt autonomously.

On a simpler note, policymakers should also recognize that in their enthusiasm to have test results come back quickly, they are directly responsible for states turning away from more innovative assessment

practices. This enthusiasm is driven by the misplaced assumption that state accountability testing has such enormous diagnostic power that the results should be driven into classrooms at the earliest possible moment. Unfortunately, two things are wrong with this thinking. First, only tests designed explicitly for diagnostic purposes can serve this diagnostic role. Accountability tests—which sample out from the lower end of the domain—do not contain sufficient items to do more than ascertain students’ strengths and weaknesses at the broadest possible levels. As a result, instructional decisions based on the results of accountability tests may miss or misdiagnose underlying problems, and are likely to be unhelpful or possibly even harmful.

Second, test scores are indicative only of the material tested. As a result, instructional changes initiated in response to test scores on assessments are limited to the areas covered by the assessment. Unfortunately, accountability tests do not represent the full range of content and skills that students need for success beyond school. This means that decisions based on accountability tests—which do not contain the most significant, relevant material—will also be limited.

Policies that are insensitive to the appropriate uses of data from test instruments—however well intentioned—must accept that a nondiagnostic instrument used inappropriately can damage the system as likely as help it. More sensitivity to having the policy dictate outcomes without dictating the means would be extremely helpful.

Systems Versus Students When It Comes to Accountability

No argument that includes assessment and standards has a chance of succeeding unless it also addresses the issue of accountability. Examining the assumptions underlying current accountability systems can help illuminate where policymakers need to make changes if the notion of college and work readiness is to be supported in the distinction of what it means to hold schools accountable.

First, accountability should continue to be about students “meeting the standard,” but it is important to understand what that means now and what it might mean in a new system.

Written standards attempt to break down broad goals—such as numeracy and literacy—into specific, manageable pieces that define what students should know and be able to do. Prior to the accountability movement, traditional, short, paper-and-pencil tests that measured the component parts of the standards were intended to function as efficient proxy measures for far more complex and broad material. However, the intent was not to lose the focus on the broader goals; “meeting the standard” was intended to take on the more global meaning of reaching the broader goals. For example, a forty-item reading test administered as a research tool did not directly measure literacy, but because of the correlation between success on the test and actual literacy, the assessment could serve as a proxy measure for that important educational goal. These types of methods were cheap and effective, and thus came to be used widely.

When policymakers recognized that success on such tests was indicative of the broader goal, the reaction was to create an accountability structure around these tests. After all, if students who did well on the tests could indeed be shown to have met the goal of literacy, then holding schools and students accountable to such tests made sense and the broader goal seemed within reach. Policymakers failed to recognize that these tests are a sample of the larger domain—generally sampling from the portions that are least relevant to college and workplace readiness—and that placing accountability on only a sample of what is deemed important could have some fairly serious unintended consequences.

As accountability was placed in the less sophisticated, less relevant proxy, the message that was sent to teachers and schools was that what mattered was not the standard as shown in the written documents that represented a domain, but rather what was necessary for students to pass the test. In the current system, students who “meet the standard” are deemed successful, as are the teachers and systems that helped them do so, but the standard represented in the tests is a far cry from written standards, and preparation for these tests is not adequate to prepare students for college and work.

Grounding accountability in tests designed to serve as proxies means that the proxies now define what matters. This mistake is exacerbated when policymakers demand tighter and tighter turnaround times for state tests,

which increases the use of assessments that can be scored quickly, which in turn increases the likelihood that states will continue to allow simpler and simpler proxy-based tests—which no longer function as proxies—to be the drivers of what it means to meet the standard. This is made even worse by budget cuts to testing programs, which force states to use even simpler testing methods for cost reasons.

Finally, as long as the *status* measure is the important one—the measure that compares, say, the percentage of this year’s fourth graders who meet the standard with last year’s fourth graders—the material that is most relevant does not need to be taught in order for the system to succeed. As in the example earlier, if a passing grade on a test is 70 percent, consider what gets communicated when accountability is added to that passing score: it suggests that any teacher or system that can get a student to that level has “succeeded.” But what meaning is attributed to the most difficult material on the test, regardless of whether the test measures the full richness of the standards or just the lesser pieces, in the form of a proxy? The answer is that for the purpose of success of the accountability system—with the indicator being the percentage of students who achieved the passing score—it does not matter. The *system* could be deemed successful even if the most relevant material was not even taught.

This means that teachers wind up with a very unhealthy tension when it comes to doing their jobs. Do they teach so that students can pass the test, and help the public and school administrators whose jobs are on the line, which may translate into “teaching to the test” and neglecting the most relevant material? Or do they concentrate on the needs of each and every student and on what it will take to get those students to the next level of knowledge? This places teachers in an unfair and difficult situation, where the needs of the system and the needs of the students do not always match, and, indeed, are often in direct conflict.

Policymakers can remove this tension by changing from a system focused on status to one focused on *growth*. However, it is important that the growth models be selected carefully, since the notion of growth as represented by test scores is one that requires real technical expertise in order to avoid

another round of unintended consequences.* This is not to suggest that simply switching to a growth model automatically alleviates the concerns of a status model, but consider the following:

1. As mentioned above, one of the concerns of the status model is that teachers are put in the untenable situation of negotiating between the needs of the students and the needs of the system. A growth model stands an excellent chance of aligning those needs in a way the status model cannot.
2. Another concern of the status model is that it focuses teaching around the passing score and not necessarily on the material most relevant to any of the possible definitions for college and workplace readiness. If growth is required for all students from one year to the next, the opportunity for the full range of material to be learned increases.
3. The notion of growth fits with the view that teaching is about meeting a student where they happen to be and then doing whatever is necessary to move that student to the next level. It fits with the commonsense approach that, while schools cannot control what happens outside or beyond schools, they certainly should be held accountable for what happens *in* schools. At the teaching level, it fits with the notion that a teacher cannot be held accountable for what occurred prior to a student coming into their classroom, but a teacher should be held accountable for his or her own efforts with that student. A status model in which this year's students are compared to a completely different set of students from a previous year just does not make sense to a teacher.

* When it comes to growth models, the actual results can seem counterintuitive to a nontechnical audience. A quick example may be helpful to show why care must be taken in determining the model. Consider the concept of "growth to standards," which has been indicated as a desirable trait for growth models. In practice, many such models wind up replicating the status models. This happens because if the achievement goal for each student becomes the passing score, then students who were farther from the mark in the previous year must take a bigger step in the current year than students who are closer to the mark—but schools are given credit for growth only when a student meets the goal, not when he or she makes progress toward it. Students who are closer to the bar are more likely to meet the goal, and a school gets credit for the growth of those students but not for the growth of students who had to take a larger step. Because the students who were closer to meeting the standard in previous years are also the students most likely to meet the standard in the current year, the growth results tend to look remarkably similar to the status results—but at much greater effort and cost and with no appreciable benefit. And while schools often do generate tremendous growth for their lowest-achieving students, if that growth misses the target it is considered unsuccessful by the model.

Next-Generation Accountability

Clearly, policymakers should consider the movement to growth models as a necessary—but not sufficient—step toward a better system. But a growth model against test instruments is still incomplete, even if those instruments address the full range of the material determined appropriate to definitions of college and work readiness.

There still exists the possibility that for those areas deemed to be completely necessary for college or workplace success (such as writing and the ability to do research), schools could be declared successful when students do not leave possessing such skills. In this case, the accountability measure could be rather simple, but with a profound impact: a school would need to state something to the effect that “no student shall leave this high school without having written well at least once,” and then commit to aligning resources around such a goal, beginning in the freshman year and commencing only when the student had met the goal. Although this is a paradigm shift from current practice, it has numerous benefits for the student and the school:

1. It galvanizes the student and the school to focus on the most significant, most relevant goals, and makes those goals a priority.
2. It makes the standard have meaning for all students without discounting the fact that students enter and leave high school with a variety of talents and skills. Some students would complete the requirement almost upon entering, while others might take four or more years. Regardless of timing, all students would leave with the same skill set.
3. It reinforces the idea that the institution as a whole, not just the individual domain teacher, is responsible for the teaching and learning of a given set of skills.

In short, while not all requirements could or should be given that kind of treatment, galvanizing student attention and system efforts would be useful for the critical tasks.

As to the various domain areas, care must be given within accountability measures for schools to address what research suggests is necessary for continued success. To dictate this from a federal level seems counterproductive; it should, instead, be supported and encouraged at the local level.

Finally, any accountability system that purports to support college and workplace readiness cannot stop at the academic level, since the definition of college and workplace readiness includes nonacademic elements as well. It was suggested earlier in this chapter that policy support for tools that would enable students and school staff to provide documentation and evidence for these other elements would call much-needed attention to them, but some level of accountability needs to be attached to the effort as well. This clearly cannot be done in the same manner as the domain areas, given both the highly subjective nature of many such observations and the fact that holding schools accountable for some habits of mind clearly biases the judgment. After all, if a school administrator is in charge of evaluating the habits of mind of the school's students, and that administrator also is held accountable for scores going up, those scores are suspect, no matter how honest and objective the administrator is in assigning them.

On the other hand, simply requiring schools to fill out questionnaires or check items off a list is just as likely to produce an invalid result, since it creates even more of a bureaucracy than currently exists and risks being done for the wrong reasons. The resulting information would fail any test of reasonableness and create one more meaningless hoop for students and administrators to jump through.

Rather, if the goal is to prepare students for the world of college and work, their preparedness once they reach those arenas should be considered part of the accountability measure. As students leave high school and embark on the next step, are they, in fact, prepared? Do those students who move on to college coursework require remediation? Do they drop out after their freshman year, and, if so, is it because they were not adequately prepared? Do students enter the world of work ready for workplace challenges? What do their employers have to say about their level of preparedness?

This remains—and will likely remain for some time—a policy challenge. If the skills identified as necessary to succeed beyond school are the skills that are important, and schools effectively support students in obtaining those skills and abilities, then that ought to be reflected beyond schooling. A set of accountability indices that enable schools to view the results of their efforts and feed such information back into their practice would be powerful, but it would have to function as a carrot, not a stick. Schools should be held accountable for careful planning in light of such indices, for showing evidence of improvements and the steps taken, and for thoughtfully pursuing improvements. It would be a mistake to simply assign an index to a school and then demand improvement. Such a strategy dismisses the complex nature of what will happen once students move beyond high school, and would likely cause far more harm than good.

Accountability to a thoughtful process that considers the results from such surveys and resulting indices treats educators as the professionals they are, and gives them a chance to act upon information they do not currently have but would find immensely valuable. It also demands that they do this as part of their regular practice in the name of the goals of education.

Conclusion

The most important point for policymakers to take from this chapter is that definitions of college and workplace readiness are not contained in a test score, but rather in a number of domain areas and habits of mind that together form the basis of what students need to succeed beyond schooling.

The second most important point is that in the creation of college- and work-ready standards and assessments, the nation must move beyond traditional notions of both, particularly when it comes to ensuring that students possess the appropriate work habits. Tests can certainly be a part of that assessment system, but a policy that stops at simple testing will always fall short.

Finally, while accountability can still invoke the phrase “meets the standard,” it needs to take a very different form than in the current system. Policymakers should recognize, accept, and gear policy toward allowing this to happen. Much remains to be done to create a new accountability

paradigm, but if it is done properly, it stands a much-improved chance of success over current systems.

Policymakers should consider the following actions (in addition to others not listed here), to encourage and support the idea of college and workplace readiness.

1. **Support the common core effort as one that should be led by states and voluntarily adopted state by state.** Included in this should be the notion that while reading, writing, and mathematics are critical, research has suggested that stopping at those domain areas for the notion of college and workplace readiness causes the definition to be incomplete.
2. **Encourage definitions of college and workplace readiness that include the habits of mind elements,** but that will also allow new research to fine-tune and improve the definition.
3. **Support the move to next-generation assessment.** This may include much more flexibility in terms of the return of test scores to allow for more meaningful measures, multiple measurement systems that include more than just traditional test scores, and online systems that allow for the proper data to be collected and shared appropriately. A way for policymakers to consider their work is to stop thinking about assessment and start thinking about measurement. By asking “What are we trying to measure?” rather than “What needs to be tested?” policymakers put themselves in a position to make better policy decisions in this arena.
4. **Fund next-generation assessment.** Much of the reason for a lack of real innovation in the assessment space is due to government reluctance to accept something that looks and feels different. When it comes to assessment, this means the continued use of outmoded and outdated methodologies. The fear of change is tremendous in schools, largely because of compliance issues, but this could be alleviated if policy were seen as supporting innovative practices that have been proven to be successful.

5. **Support growth models for accountability purposes in domain areas, but recognize that not all growth models are created equal, and that dictating the technical elements of the work has created some unintended consequences.** To this end, policymakers will need to keep an open mind and trust the research that has produced excellent information on understanding and measuring growth.

6. **Support accountability definitions that include information from a variety of sources,** including observations, test scores, portfolios, and so on. Policymakers should acknowledge that many elements of the college- and work-ready definition cannot be assessed in traditional formats. They should also be willing to assign accountability to schools that are carrying out a careful and thoughtful process. If this can be done in light of the goal—that is, what actually happens to students who leave school prepared according to the definition—schools can be held accountable for the thoughtfulness of their planning and strategic processes with regard to emerging data.

The views expressed in this chapter are those of the author and do not necessarily represent those of the Alliance for Excellent Education.

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¹ D. Conley, *Toward a More Comprehensive Conception for College Readiness* (Eugene, OR: Educational Policy Improvement Center, 2007).

² ACT, *Impact of Cognitive, Psychosocial, and Career Factors on Educational and Workplace Success* (Iowa City, IA: Author, 2007).

³ Conley, *Toward a More Comprehensive Conception for College Readiness*.

⁴ Ibid.

⁵ ACT, *Impact of Cognitive, Psychosocial, and Career Factors on Educational and Workplace Success*.

⁶ L. B. Resnick, "Making America Smarter," *Education Week Century Series* 18, no. 40 (1999): 38–40.