

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

At the Department of Mathematics of the University of Iowa, we discussed and compared the alignment of mathematics component *Achievement Level Descriptors and College Readiness Policy of February 4, 2013* (ALD2) with the CCSS mathematics documents [http://www.corestandards.org/assets/CCSS\\_Math%20Standards.pdf](http://www.corestandards.org/assets/CCSS_Math%20Standards.pdf) and CCSS Mathematics Appendix A. We only evaluated these at the high school level, and 11<sup>th</sup> grade assessment. Although there are several changes from the first version, our main concerns were not addressed, and we will reiterate them.

The CCSS Mathematics Appendix A, the Overview of the Traditional Pathway for the Common Core State Mathematics Standards, (pages 8 and after) explains how to divide the core curriculum in high school into 4 courses:

1. High School Algebra I,
2. Geometry,
3. Algebra II, and
4. A fourth course (can be called precalculus)

**A thorough review of the SBAC targets for the 11 grade assessment shows that it covers the material of High School Algebra I, almost no high school Geometry, and about 3/4 of Algebra II. See item 4 below for details.**

SBAC states that:

- i. On page vi, Table 2, "Students who perform at the College Content-Ready level in mathematics demonstrate foundational mathematical knowledge and quantitative reasoning skills necessary for introductory courses in a variety of disciplines. They also demonstrate subject-area knowledge and skills associated with readiness for entry-level, transferable, credit-bearing mathematics and statistics courses."
  - ii. On page viii: "most typical entry-level college mathematics and statistics courses (e.g., College Algebra and Introductory Statistics)"
  - iii. On page viii: "The CCSS also include a set of standards, primarily for instruction during Grade 12, to prepare students who seek to major in a Science, Technology, Engineering, or Mathematics (STEM) field and will need to take more advanced mathematics courses (e.g., Calculus) during the first year of college. Because the Smarter Balanced Assessment System concludes at Grade 11, it does not include items and tasks aligned to these STEM-related standards."
1. What is SBAC's main purpose? Is it (a) testing whether the high school students had learned the high school mathematics in the grades 9-11, or (b) to predict a placement in 12<sup>th</sup> grade, or both?
    - a. SBAC does not accomplish (a) since it does not test the Geometry material, which is taken before Algebra II. SBAC must follow the standards set by CCSS; it is not the other way around.
    - b. SBAC does not accomplish (b) since a student reaching level 4 may need to take Geometry or Algebra II or a higher level course in 12<sup>th</sup> grade. The students at lower levels may be in need of taking Algebra I. Is there a plan to give a more detailed scoring to separate these students into the appropriate courses?
    - c. It is clear in (iii) above that SBAC will not include items and tasks aligned to these STEM-related standards. However, by not evaluating all of standards (those without (+)) of the first three courses of the common core, SBAC is not even checking the preparedness of

SUBMITTED TO SBAC BY DIANA GONZALEZ  
 ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
 COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
 FEBRUARY 21, 2013

the students for these items and tasks. These students may not be able start with Calculus in college by the misguiding messages from SBAC. There must be messages in several places in level 4 to direct the STEM major bound students to lists of plausible options, rather than saying “you can take a college credit-bearing entry-level college mathematics course, College Algebra”. See, the gap discussion in 3.c below.

2. Not evaluating of the High School Geometry is very disturbing, see 4.g below. The high school Geometry course stands out in high school curriculum, since this is where the students are expected to learn basic logic and mathematical reasoning in addition to the content that is essential for many college students in many subject areas.
3. Table 3 on Page vii of ALD2: Policy Framework for Grade 11 Achievement Levels

Level	Policy ALD	College Content Readiness	Implications for Grade 12 and College Placement
4	Demonstrates deep command of the knowledge and skills associated with college and career readiness	Student is exempt from developmental course work.	States/districts/colleges may offer advanced courses (such as AP, IB, or dual enrollment) for these students. Colleges may evaluate additional data (courses completed, grades, placement test scores, etc.) to determine student placement in advanced courses beyond an initial entry-level course.

- a. Probably most urgent is the topic of the grade 11 test score of level 4 and its designation of “College Content Readiness” of ALD. These messages have to be rewritten. These levels should clearly and forcefully indicate that readiness for college placement in grade 11 means that those students need to take, in the very next year in school, grade 12, the next higher level of mathematics course. That course might be a high school level math course such as an AP calculus course more advanced than the student has already taken, or a college-level class at a local or on-line approved college or university math course, more advanced than the student has already taken. Without this clear recommendation, students might get the grade 11 designation “College Content Ready” by scoring level 3 or 4, then take no math in grade 12, and be significantly behind or disadvantaged in a college-level math class the next year, in spite of already having been designated as “College Content Ready” at the end of grade 11. We know quite well that students forget mathematics if they do not take a math course for a year or two. Such a problem for the student could lead to real difficulties in placement in college-level math classes. **Recently suggested idea of removing “College Content Ready” designation from the students who do not take a math course in the 12<sup>th</sup> grade is excellent.**
- b. The Table 3 Level 4, “College Content Readiness” message is misleading, since the student may need to take Geometry which is a remedial course in many colleges.
- c. There is a gap between “College Content Readiness” and “Implications for Grade 12 and College Placement” in level 4. Even if SBAC improves the ALDs to cover geometry, the students still need to take a 4<sup>th</sup> course (e.g. precalculus), before they can be ready for AP Calculus. This message is misleading, suggesting that the student is ready for Calculus, rather than College Algebra. This message should go along the lines of:

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

- i. The student is ready to take College Algebra or a higher level course, and the determination of the next course will be done by using additional data (courses completed, grades, placement test score, etc.)
  - ii. States/districts/colleges may offer advanced courses (such as precalculus, AP, IB, or dual enrollment) for these students.
  - iii. There should be a referral in this box to a list of possible paths for math courses for STEM-majors, and for any major requiring calculus.
  
4. Here is our list of deficiencies we still see in the math ALD2, in comparison to the first three math courses of CCSS. We will refer to Target x from ALD, as well as CCSS standards numbers x.xx.x. Our list is not in order of importance, but we will follow the orders of ALD and CCSS, which are the same.
  - a. In Level 4 Target I of ALD2 mentions finding the complex roots of quadratics, but the basic algebra of Complex numbers N-CN are not included.
  - b. Target F has only A-APR.1 (arithmetic on polynomials) taught in Algebra I, and it does not get into the rest of A-APR, (zeros of polynomials, algebra with rational functions). Later, ALD2 expects in Target J Level 3 that students can solve polynomial and rational equations graphically, and in Level 4 Target M, expects graphing polynomials.
  - c. There is an inconsistency between Target G Level 4 and Target J Level 3. One has rational functions but not trigonometric functions, and the other one has it in the other way around.
  - d. Target L Levels 3 and 4 use the expression “key features”, and we hope that they include intercepts, increasing, and relative max as in F-IF.4.
  - e. Building new functions from existing functions, F-BF.3, 4a, shifting, flipping, stretching graphs are completely missing.
  - f. Linear, quadratic, and exponential models are not addressed separately as it is done in CCSS.
  - g. **Target O is the only referral to the Geometry course, and almost all of a High School Geometry course is missing.** Our further examination of the 3-8 grade math ALD shows that some (but little) of the geometry material are covered at a lower level. However, knowing all of 8<sup>th</sup> grade geometry is not sufficient for college readiness, and also the high school students take a High School Geometry course on which they should be tested.
  
5. As several of us being geometers and teaching “proofs” in college for extensive number years, we believe that writing proofs of theorems in geometry is the last topic an artificial intelligence based assessment should try to assess. SBAC will do a better job in assessing problem solving and logical reasoning in geometry involving congruence, similarity, trigonometry, circles, and other topics from CCSS at high school level: G-all pages 75-78 of CCSS, rather than proof writing that may be limited to fill in the blanks.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

Summary: We are very concerned about these topics that are cut from CCSS for compiling the targets for SBAC. It appears that high school geometry and parts of polynomials, algebra of rational functions are being considered not essential by SBAC for some reasons. Trigonometric functions are covered minimally. We understand that these are not easy for the high school students. However, using expressions such as “college content ready” by an assessment actually based on “Algebra I, almost no high school Geometry and 3/4 of Algebra II” is quite misleading, and it is not for the benefit of the students.

The last issue is about lowering the bar too much. SBAC may only be concerned about the assessment in high schools, but we (the colleges and universities) are also concerned about our students finishing the college in 4 years, including STEM majors. If “College Content Ready in Math” is equated to be ready take College Algebra in college, then SBAC should be honest with the students and also tell them that this may result in going to college for another semester or another year. We understand that the range of the math knowledge of the high school students is very wide. The STEM-bound students should not be misguided or forgotten, while the SBAC is only concerned in testing another part of the spectrum. Throughout the country, improving STEM education is a first priority in these days. SBAC should give detailed messages in level 4 for the STEM-bound student as well.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

The University of Northern Iowa appreciates the opportunity to respond to the revised ALDs released by Smarter Balanced. It is worth noting that from the beginning many of our concerns were broader than what may be addressed in this revision about the role of testing in driving college curriculum and admission processes. As such, many of those issues still remain.

Instead of creating a new report on the revised ALDs, we have chosen to add comments in red indicating whether or not our original concerns have been addressed.

In sum, while we acknowledge the importance of consistently high educational standards in the K-12 system, in the end, we in higher education must insist upon independent control over and the final say in what we regard as readiness for university level study.

I was very disappointed to learn the ELA assessment would be graded electronically. I just don't believe that a comprehensive writing assessment can be evaluated by a computer. This may work for basic grammar and vocabulary, but I don't see that being possible for stylistics, paragraph formation, thesis building, transitions, introductions, conclusions and content.

I'm not sure that it is appropriate to be calling the assessment an ELA/literacy assessment when it doesn't cover speaking or much listening. It may be that the assessment should be called something like reading comprehension and grammar/vocabulary assessment. ELA/literacy seems much too lofty for what they are actually doing.

**ORIGINAL RESPONSE WITH COMMENTS ON REVISED ALDs IN RED INK**

Re: The Impact of Smarter Balanced Assessment on Higher Education: Comments, Concerns and Questions

**Context**

The Smarter Balanced Assessment Consortium project will provide both opportunities and challenges for higher education in Iowa. Though the discussions between Smarter Balanced and higher education in Iowa have just begun, many changes, from admissions' policies to educating future teachers, will be necessary to align higher education practices with the Smarter Balanced Assessment. Clearly, higher education must play a prominent role in the on-going discussions, development and implementation of Smarter Balanced Assessment. In the present document, we cannot address all aspects of the impact; instead we will focus specifically on the task at hand, to provide an evaluation of the "Initial Achievement Level Descriptors and College Readiness Policy" with a special focus on the 11<sup>th</sup> grade assessments and the level 3 and 4 implications.

Though we are being asked to voice our concerns with regards to these particular documents, it should be noted that we also see a number of opportunities and benefits related to the implementation of Smarter Balanced Assessment.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

Positive attributes:

- The implementation of Smarter Balanced would encourage accountability in K-12 education.
- Proficiencies in the content areas of ELA/literacy and mathematics would be demonstrated.
- Assessment would be carefully and systematically aligned with the Common Core State Standards.
- The design of a conceptual framework for the assessment system accompanied by clear definitions of terms used in assessment documents and the development of achievement level descriptors (ALDs), gives coherence to the content of the document.
- The classification of the ALDs into four types (nice small number): Policy ALDs, Range ALDs, Threshold ALDs, and Reporting ALDs and the organization of the ALDs in tabular form by type, use, purpose, and intended audience, together make the document easier to read and understand.
- The decision to report outcomes in terms of four (another nice small number) levels of achievements, Level 1, Level 2, Level 3, and Level 4 is highly laudable.
- The small number of sample test items which Smarter Balanced has released to the public indicate, if only partially, the promise of an assessment regime that is aligned with the CCSS.

This response is divided into three parts. After an initial discussion of our general concerns regarding the overarching description of the college readiness policy, we provide more specific comments on the ELA/literacy and mathematics ALDs.

**PART 1: Response to “Initial Achievement Level Descriptors and College Readiness Policy”**

The common introduction to the content specific ALDs provides an overview of the Smarter Balanced initiative as it relates to the development of a common vocabulary and achievement level descriptors for both English language arts/literacy and mathematics. Summarized below are our comments, concerns and questions regarding this portion of the document.

Concern:

- We are concerned that designating 11<sup>th</sup> grade students as college-ready will have the unintended effect of redefining the length of a high school education to be basically three years, as opposed to the current four years, and treating the senior year as a freshman year in college. In a bid to have as many students score at Level 3 or 4 as possible, School districts will push high school teachers to speed up the pace of instruction in order to cover the entire high school curriculum by the end of eleventh grade. While this may work well for top tier students, it may not serve the average high school student well. We think this would be regrettable.

**The above observation, highlighted in red, remains a concern..**

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

Comment:

Eleventh grade has always been and continues to be a pivotal moment in K-12 education. Traditionally, those students planning to pursue higher education begin the selection and admission process at this time. While assessment of grade eleven proficiencies is important, the premise of this process has been that additional gains would be required and achieved in 12<sup>th</sup> grade. If a high score on an 11<sup>th</sup> grade assessment deems a high school student “college ready” rather than indicating that a student is “on track”, we must ask ourselves what is to become of senior year? In other words, are we really moving toward a new K-11 education system?

Concern:

- In the first paragraph under College **Content Readiness**, Smarter Balanced says, “Specifically, a test score that results in achievement levels 3 or 4 will be evidence that the student is ready for credit-bearing coursework and **may** be exempt from remedial or developmental courses.” However, the Table 5, Policy Framework for Grade 11 Achievement Levels, says a student performing at Level 3 or 4 **is** exempt from developmental course work (contingent on evidence of continuing learning in Grade 12). Table 5 goes on to say in reference to students scoring at Level 3, “Colleges **may** evaluate additional data to determine student placement in advanced courses beyond initial entry-level course.” The phrases “may be exempt” and “is exempt” mean different things, so it is unclear what the intended meaning is.

**The above observation, highlighted in red, remains a concern..**

**Additional Comment:**

**Indeed this is an even bigger concern now. The second draft on page viii under the bullet “Math Requirements for Advanced Courses” seems to suggest that college readiness for mathematics means readiness to take courses like College Algebra and Introductory Statistics on the basis that this is in line with the intent of CCSS in mathematics. At UNI College Algebra (which we call Intermediate Algebra) is a non-credit-bearing developmental course.**

Comment:

The document makes vague and seemingly contradictory statements regarding the “exemption of developmental coursework.” Take for example the following statement:

Representatives of higher education have been working closely with Smarter Balanced in the development of the Smarter Balanced assessments. This partnership is important because **a primary goal of Smarter Balanced is that colleges and universities use student performance on the assessment system as evidence of readiness for college.** Specifically, a test score that results in achievement levels 3 or 4 will be evidence that the student is ready for credit-bearing coursework and may be exempted from remedial or developmental courses. (p. 5)

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

Compare it then to the following:

Smarter Balanced recognizes that college readiness encompasses a wide array of knowledge, skills, and dispositions, not all of which will be measured by the Smarter Balanced assessments. As a result, Smarter Balanced narrowed the focus of its college readiness definition to content readiness in the core areas of ELA/literacy and mathematics (see Table 4 below). Further, **Smarter Balanced recognizes the limits of relying on a single test score for making high-stakes decisions and fully supports the use of multiple measures to determine student course placement in higher education.** (pp 5-6)

It remains unclear whether or not the use of multiple measures when evaluating a student's ability is being emphasized. While much of the narrative description cited above speaks to the possibility of using multiple measures, Table 5 clearly states that the Level 4 student "is exempt from developmental course work." We are left to wonder whether or not Level 4 students "may" or "will" be exempt from developmental course work.

While one might assume that a Level 4 test taker would succeed in an entry-level credit bearing college course, the reality is that being "college ready" does not guarantee success. What happens when a 1<sup>st</sup> year college student who earned a Level 4 ranking fails an initial entry-level credit bearing course? In this particular context, might then the university suggest that remediation take place? If so, would we then be in violation of our own policy? Would this lead students and parents to question their responsibility in paying tuition for such courses?

The process in determining a student's ability in any one content area is certainly difficult, but does not even come close to the complexity of determining one's level of overall college readiness. It is not uncommon for a student to demonstrate academic readiness within a standardized testing environment and then go on to be incapable of actually performing at that proficiency level within the real world context of higher education.

At present UNI uses a multi-faceted approach in evaluating a student's readiness. Based on an analysis of a student's ACT composite score, high school rank, GPA and number of high school core courses taken students can be admitted conditionally or unconditionally. While UNI could continue to use a balanced approach to evaluating students with a Level 1, 2, and 3 test score, the same does seem true for Level 4 students. At present it is impossible for us to know whether or not this will be problematic as we do not yet know how many students will earn a level 4 ranking.

In sum, Smarter Balanced says it "recognizes the limits of relying on a single test score for making high-stakes decisions and supports the use of multiple measures to determine student course placement in higher education." We are concerned that Smarter Balanced may be understating the potential impact that its assessment system will have on admissions decisions and placement of students in courses in higher education. Because the CCSS Initiative was a state-led initiative coordinated by the National Governors Association (NGA), the assessment systems which Smarter Balanced and the Partnership for Assessment of Readiness for College and Careers [PARCC] are developing to assess student performance on the CCSS will in all likelihood be perceived by the public as having the imprimatur of the state governments, if not of the federal government. These

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

assessment systems will be viewed by the public as having higher standing than familiar assessments such as the ACT or the SAT. Admissions decisions or placement policy that seem at odds with the Level 3 or Level 4 recommendations are likely to engender fierce opposition from the public. We are concerned that the interpretations of Level 3 or Level 4 proposed by Smarter Balanced will likely expose higher education institutions to a public relations nightmare.

Concern:

- It may not be possible to create a single definition of college readiness that speaks to the diversity of higher education institutions, visions and practices.

**The above observation, highlighted in red, remains a concern.**

Comment:

General concern that an overarching college readiness definition combined with an attached policy will diminish the understanding of the diverse nature of institutions of higher education. Creating one definition of “college readiness” that applies to any and all institutions of higher education is problematic. .

What this test assures is that students meet high school (11th grade) common core standards and, in some cases, excel at these standards. Why make any implicit promises about college readiness given the different expectations of various colleges and the need for not just academic, but also social and emotional preparedness? A different term, such as “high school fluent” makes the only promise such a test can make--that the student has met or exceeded the expectations for an Iowa high school curriculum

The institutions of higher education are as diverse as they are numerous. Choosing the “right college” is a difficult task that should not be minimized. This is not a choice or decision that we can be willing to standardize, as each institution seeks to create a *unique* educational experience for its students.

**PART 2: Response to ELA/Literacy ALDs (specific focus on 11<sup>th</sup> Grade)**

**Additional Comments:**

- We note that the ALD’s for ELA/Literacy (Table 4) still make reference in the Content Claim to speaking skills and yet the content level descriptors only respond to the listening skills.
- We find it reassuring that there has been a move from “College Readiness” to language about “College Content Readiness”
- In the Webinar, it became clear that “participating colleges” will *guarantee* that someone that scores at or above a 3 in eleventh grade will not be placed in a developmental or remedial course. This has direct bearing on our concerns on page 3 of our response that the level 4 student *may or will* be exempt. In other words, the clarification in the webinar moves in the wrong direction from our initial response.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

**We do note however that they did remove the sentence that we refer to at the bottom of page two.**

Summarized below are our conclusions regarding the initial achievement level descriptors (ALDs), the sample question, and the preliminary test blueprints developed for ELA/Literacy by the Smarter Balanced assessment consortium.

Positive attributes:

- Well aligned with skills associated with the Common Core Standards
- Some elements of formative assessment included – real writing assessed
- College readiness assessment attempted

Concerns:

- Heavy reliance on summative assessment in ELA/Literacy is unsupportable
- Speaking claims not supported in the test design as described
- The writing tasks include no creative writing contrary to claims of “a range of purposes”
- Cultural differences and ELL proficiency could be a factor in test scoring of performance tasks
- Computer adaptive testing raises questions
- Grade 8 and 11 ALDs are the same in many cases
- Technology use in document design and research skills cannot be well assessed in timed, administered test
- The expectation that students deemed “college ready” in 11<sup>th</sup> grade ought to fulfill college-level courses in 12<sup>th</sup> grade is deeply problematic.

Comments:

The Smarter Balanced assessment of ELA/Literacy presents a step forward in some aspects of student evaluation in the area of English education. This assessment is a much better match with the Common Core standards than previous assessment tools such as Iowa Test of Educational Development (ITED). The Smarter Balanced assessments make an effort to move beyond summative assessments by including “formative tools and practices” though clearly stating that these are not assessments. They have included “performance tasks” that require students to engage in writing and listening to determine student skill level. Speaking, however, is left out of these performance tasks despite the claim that the Smarter Balanced assessments will assess whether “students can employ effective speaking and listening skills.” While this inclusion of formative “tools” is a step forward, it is hardly the “Balanced Assessment System” claimed in the Test Blueprints document. Further it is not clear what weight the performance tasks will have against the traditional summative assessments.

The Smarter Balanced assessments make the following claim about writing, “Students can produce effective and well-grounded writing for a range of purposes and audiences.” At no time during a study of these documents did I see any performance tasks relating to the writing of any creative text. Little, if any, information was discerned concerning what specific topics students would be asked to compose. The choice of topics is a difficult one when considering the cultural and familial differences of the test takers. Such differences could advantage or disadvantage students taking the tests.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

While this problem is not unique to the Smarter Balanced testing, the application of this test to English Language Learners in their second- or third-language clearly disadvantages them in skills related to analysis and research, skills they may excel at in their first-language. Including students with limited English skills in the testing lowers the norms for other test-takers and does not accurately assess ELL student skills.

The Smarter Balanced assessments make use of computer adaptive testing. Allowing for the assessment of the full breadth of the content taught without requiring each student to complete all of the items on all of the content. Briefly the computer will select what questions to offer to a student based on answers to early questions. Theoretically a student who misses items early in the exam could be shifted to a lower score bracket as the computer adjusts the content of the test. The advantages and disadvantages of this system are complex and need further study.

Considering the specific ALDs, we see two potential problems. First, grade 8 and 11 ALDs are the same in many cases. We would have to trust test designers to determine text levels that are appropriate for each grade level. This would depend upon the student's individual interests and knowledge base. What is an easy text for a child with much exposure to, for example, antique collection, may be mystifying to another child. Plus, we would have to trust the test evaluator to identify and separate out different targets within a sample student essay. In many cases, the targets are not easy to isolate. In the sample question, for example, a child might not think to delve into the grandmother's motives, though this would show the ability to draw inferences. The obvious answer to the question is that Naomi learns how Grandma Ruth was named. But a level 4 response would infer that Naomi learns what Grandma Ruth values (childhood play, her granddaughter's feelings). Would a child know to develop the answer in greater depth or would the child be more worried about time and unclear about expectations on this test?

Secondly, the test is limited in its ability to assess several common core standards: speaking (not assessed at all), research (very difficult to assess outside of a longer research project in which students make choices based on a full range of library and on-line materials), and technology use in documents design (also, very difficult to assess within a timed test in which students have very limited technological tools). It may be better to leave these standards to be assessed by individual teachers, rather than this standardized format, than to present an unrealistic situation and consider it representative of a student's skills.

Rating the college readiness of students in the area of ELA/literacy and mathematics is a worthy goal. Smarter Balanced Assessment Consortium states that representatives of higher education have been consulted in the creation of college content readiness definitions. No listing of these representatives was included in the documents reviewed. Students entering higher education do present a wide variance in their preparation for college work. There are many reasons for this beyond how students are prepared in high school. Some students with skill deficiencies are entering college from community college or are non-traditional students who have delayed entering college for a variety of reasons. Stated explicitly in the College Content Readiness section of the Preliminary Test Blueprints document (page 6) these assessments are "... not designed to inform college or university admission decisions. This declaration is troubling given the high probability of their use for that exact purpose.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

Finally, we have many questions regarding how the test would impact school curriculums, such as whether items not assessed are minimized in the curriculum (ie. speaking skills and knowledge of literary traditions) and whether teachers in disciplines outside the language arts will help students to develop skills in analyzing and responding to informational texts, or whether ELA teachers will have to shoulder this in addition to the response to literary texts.

Because reading and writing are everyday activities and not clearly sequential in the way that math can be, declaring a student "college ready" in 11th grade under-rates the degree to which students can benefit from not only 12th grade writing but also a college writing course. Even competent writers can improve tremendously in writing classes. If we must provide for earning college-credit for writing in high school, AP exams are far more demanding than dual enrollment courses typically are.

**PART 3: Response to mathematics ALDs (specific focus on 11<sup>th</sup> Grade)**

We applaud the Smarter Balanced Consortium (Smarter Balanced) for undertaking at breathtaking speed the task of developing one of the assessment systems aligned to the Common State Standards (CCSS) (the other being PARCC). In the course of developing the assessment, Smarter Balanced has released several documents for public review and has asked for feedback. One of these documents is titled, "Initial Level Descriptors and College Readiness Policy." What follows is a critique of this document, with a special emphasis on issues related to mathematics. After providing a list of more general overarching concerns, we provide a more detailed analysis of mathematics ALDs. The critique identifies what we see as the strengths and weaknesses of the document.

Over-arching Concerns:

- At the three Regent universities in Iowa we have been pushing to reverse what we see as a troubling but growing trend in which many high school students take the required three years of mathematics in their first three years of high school and stay away from mathematics courses in the fourth year. The result is that by the time the students get to college, they have forgotten a lot of the mathematics they have learned in high school. We are concerned that a college-ready designation in the eleventh grade may send the wrong message to some students and parents that they can sit out, take it easy, or otherwise concentrate on sports and other extra-curricular activities in their senior year.

**The above observation, highlighted in red, remains a concern.**

**Additional Comment**

**In addition to the concern expressed here, Smarter Balanced has still not decided on the shelf-life of their test results.**

- As described in the document the assessment system is not diagnostic, and offers the student who scores at Level 1 or 2 little guidance on a way forward, e.g., by recommending possible remediation pathways leading to retesting. In its present form the document takes no firm stand on retesting; it only suggests that local jurisdictions may wish to consider retesting at the end of the 12<sup>th</sup> grade. Smarter Balanced needs to clarify its position on retesting.

**The above observation, highlighted in red, remains a concern..**

**Additional comment:**

**Smarter Balanced has now firmly decided that students will only have one opportunity to take the test in 11<sup>th</sup> grade and is leaving it up to the states to address the issue of what to do with students who score at level 1 and level 2 on the assessment.**

- We have implemented placement tests at the three Regent universities for incoming students. We are concerned about the potential public relations nightmare which would inevitably result from cases of students who come from high with a level 3 or 4 score but do poorly on our placement test. Clashing indications of college-readiness will be confusing to students and parents and will undermine the legitimacy of our placement policies, even when these policies are based on an analysis of performance (not sample, but population) data of the type of student we serve.

**This is still a concern.**

**Additional comment:**

**Indeed, the fact that Smarter Balanced treats College Algebra as a credit-bearing first year college course but UNI and many other universities treat the course as a developmental course will confuse students and their parents. This again points up the impossibility of developing an all-encompassing policy.**

Mathematics ALDs

The Smarter Balanced assessments represent a unique opportunity for advancing mathematical learning throughout K-12. The alignment of the assessments to the elements of the Common Core Curriculum (including both the Content Standards and the Standards for Mathematical Practice) will help to ensure that the knowledge and capacities being developed by teachers and students in accordance with the Common Core will ultimately be valued.

While the Smarter Balanced assessments show much promise in terms of providing detailed feedback on student understanding of important mathematical concepts, questions and reservations regarding policy implications for higher education remain. In the next few paragraphs, we will describe our thoughts on the strengths of the assessment, along with our questions and concerns regarding the College Content Readiness portion of the Smarter Balanced Mathematics Achievement Level Descriptors (ALD) document.

First and foremost, it would be hard to overstate the impact an assessment system of the type contemplated by Smarter Balanced and the PARCC assessment systems will have in moving mathematics education forward toward a vision more closely-aligned with that of the National Council of Teachers of Mathematics. While many teachers have in the past implemented changes in their teaching in an attempt to align with recommendations of promising practices, such changes have often proven difficult to maintain because of the lack of alignment between practices supported by research and the knowledge measured through standardized assessment. The knowledge evaluated in the released sample items appears to align very closely with research on mathematics education instruction and assessment. In informal conversations with mathematics

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

teachers about the Smarter Balanced sample items, the teachers have expressed concern over the gap between their current instructional practices and the implied change (as embodied in the tasks) that will be required to increase the rigor in their classrooms. The performance task, Crickets, provided in the sample items requires students to understand and interpret linear regression using multiple measures and to compare best-fit models. In addition, the task requires students to solve a problem involving a level of complexity well beyond that found in a typical one-minute standardized assessment question.

Sample items indicate the value of the Standards for Mathematical Practice. Tasks such as sample item 43028 allow for the possibility of multiple correct solutions based on different, yet acceptable, mathematical justifications and reasoning. The task requires students to be able to “Construct viable arguments and critique the reasoning of others” (CCSS.Math.Practice.MP3), a skill higher education institutions value and want incoming students to possess. Another potential strength of Smarter Balanced is its willingness to allow students to use interactive technology to explore and reason with and about the content of the question. Sample item 42968 demonstrates the power of this approach and how it may change the style of more typical assessment questions. The balance between technologically-enhanced questions and questions that limit calculation tools is noted in items such as 42906.

While the strengths noted in the sample items give promise to the potential impact of Smarter Balanced assessments on K-12 classrooms, the items along with their rubrics and the ALD document also raised concerns and prompted further questions. These concerns and questions (which arise from the lack of sufficient released information) are noted below.

Concerns:

- Of primary concern is the computation of achievement levels for students, as it has clear policy implications for institutions of higher education (as noted in bullet 2). It is unclear how the points indicated on the rubrics are explicitly connected to the calculation of a Level One, Two, Three or Four. What will students need to demonstrate to earn a Level Three or Level Four on a claim? How will claim scores be combined into an overall score for the student? By reading the material provided, looking at the sample items and studying the accompanying rubrics, it is difficult to measure whether students will be “college-ready” or ready for “credit-bearing coursework” without much more information and explanation.  
(We reproduce the description of the levels here for reference.)
  - The Level 4 student demonstrates deep command of the knowledge and skills associated with college and career readiness.
  - The Level 3 student demonstrates sufficient command of the knowledge and skills associated with college and career readiness.
  - The Level 2 student demonstrates partial command of the knowledge and skills associated with college and career readiness.
  - The Level 1 student demonstrates minimal command of the knowledge and skills associated with college and career readiness.

**The above observation, highlighted in red, remains a concern.**

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

**Additional Comment:**

**Smarter Balanced says the final description of reporting ADLs will only be developed after the test has been field-tested. Whether the public will have a chance to weigh in on the development of the final description remains to be seen. These lingering questions do not inspire the public's confidence in the process. A better approach might have been to run a pilot and gather data over several years, and to use the results to inform the development of the reporting ADLs. It is difficult to critique something that does not yet exist.**

Unless the concern mentioned above is addressed, the following quotation from the ALD document is problematic.

“Specifically, a test scores that results in achievement levels 3 or 4 will be evidence that the student is ready for credit-bearing coursework and may be exempted from remedial or developmental courses.” -p. 5.

- We could not tell how Smarter Balanced determines an achievement level 3 or 4 in sample items and we did not see enough evidence that students earning these two achievement levels are necessarily ready for the indicated coursework or coursework exemptions. That said, we note that in making the following statements Smarter Balanced seems to be sounding a cautionary note, which would be laudable if the statements didn't seem to contradict rather than complement each other.

“As the ALDs are the initial version, the definition and policy framework represent initial work that will be refined once student performance data are collected and analyzed.” -p. 5

“Further, Smarter Balanced recognizes the limits of relying on a single test score for making high-stakes decisions and fully supports the use of multiple measures to determine student course placement in higher education.” – p. 6

“Finally, the college content-readiness definition and policy framework are not designed to inform college or university admission decisions because the Smarter Balanced assessments are not being developed for that purpose.” -p.6

**The above observation, highlighted in red, remains a concern.**

**Additional comment:**

**This remains a concern for the reasons given in the preceding comment. Despite the attempt to clarify the distinction between the levels, the lack of data showing how these distinctions will be made in practice is concerning.**

- The rubrics that accompany the sample items provide possible solutions but lack depth in content, given the open-ended nature of some of the sample items. Questions remain regarding exactly how points will be earned and what will determine the sufficiency of a justification.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

**The above observation, highlighted in red, remains a concern..**

- The rubrics align with claims, yet it is unclear how the points identified in the rubric contribute to receiving an ALD. (For reference, we reproduce the claims as noted below.)
  1. Concepts and Procedures—Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.
  2. Problem Solving—Students can solve a range of complex, well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.
  3. Communicating Reasoning—Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.
  4. Modeling and Data Analysis—Students can analyze complex, real-world scenarios and construct and use mathematical models to interpret and solve problems.

**The above observation, highlighted in red, remains a concern..**

- Institutions of higher education may want more specific information about mathematical content (similar to subsection scores on other standardized tests). Will this information be possible to get if the reported ALD is given for the Claims stated above?

**The above observation, highlighted in red, remains a concern.**

**Additional comment:  
Again, the field testing hasn't even begun.**

- While the sample test items are helpful indicators of the style of questions by which students will be assessed, we are concerned that such a relatively small sample of items makes it difficult to draw conclusions about the rigor of the content of the assessments.

**The above observation, highlighted in red, remains a concern.**

- Similarly, while the sample tasks are rich as has been noted above, the mathematical content knowledge necessary to solve them does not appear to reach the threshold of an upper-level high school mathematics class. Will these concepts, which are present in the Common Core, be assessed as suggested in the ALD document table? If so, what will the questions and the criteria for evaluations look like?

**The above observation, highlighted in red, remains a concern.**

- While the depth of technology usage throughout the assessment should be commended, we have concerns regarding student access to the technology required to implement the assessment. In a state like Iowa, there exist rural districts that will be challenged to provide

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

the hardware and connectivity required to complete the assessment. What is Smarter Balanced doing to ensure that students have access to the appropriate technology needed to administer the assessments?

**The above observation, highlighted in red, remains a concern.**

- In a similar vein, it is important that assessment procedures align well with methods of instruction. Given that the Smarter Balanced assessment is completed through interaction with technology, how can we ensure that students will have access to and experience with similar technology during instruction prior to engaging in such a high-stakes assessment, so that assessment comports with instructional practices?

**The above observation, highlighted in red, remains a concern.**

The Smarter Balanced assessment system represents a unique opportunity to move mathematics education forward in the US. We recognize and appreciate the myriad positive elements of the proposed assessments, but we remain concerned about some of the policy implications for higher education. We hope that the lack of detail and the seeming inconsistencies that make these policy elements of the document problematic will be addressed as the document is revised.

**Iowa State University**  
**Smarter Balanced AC**  
**Initial Achievement Level Descriptors and College Readiness Policy – Revised**  
**Version**  
**Mathematics**  
**Main Concerns**

1. The Concept of ‘College Readiness’

The revised version contains some rewordings and reorderings in the discussion of ‘college readiness’. In particular, we appreciate the use of the term ‘content-readiness’. However, the key wordings on p. v, vi, vii are the same as before and we continue to argue that the SBAC concept of ‘college readiness’ based on one 11<sup>th</sup> grade test is bound to create misunderstandings and misguidance for students (and their parents). The section ‘College Content Readiness’ in [1] proposes consequences from the SBAC 11<sup>th</sup> grade exam, but without giving any reasons why such consequences may be warranted. Table 3 on p. vii of [1] mentions ‘additional data (courses completed, grades, placement test scores, etc.)’ only for placing students in ‘advanced courses beyond an initial-entry level course’ if students pass the SBAC 11<sup>th</sup> grade exam at levels 3 or 4. Given experiences with other exams, such as ACT or SAT, and their inability to properly place students in entry level courses, the consequences in Table 3, if actually implemented, are likely to cause many students to fail their first college course, and hence to jeopardize their successful college education. The “Score Expiration Guide” on p. ix suggests that expiration of the 11<sup>th</sup> grade SBAC exam should be considered for those students that do not proceed directly from high school to college. Research into mathematics learning clearly shows that the ‘expiration’ of learned concepts in mathematics sets in as early as two months after content knowledge has been demonstrated in an exam (without content follow up). Hence ‘expiration’ concerns should be addressed for all students.

**We recommend** that the language ‘college readiness’ be abandoned and replaced by ‘proficient for 12<sup>th</sup> grade work’. We also recommend that SBAC look at the 12<sup>th</sup> grade work that is possible under CCSS (e.g. the ‘fourth course’, see [2], or specific AP and IB courses) and specify for which work the 11<sup>th</sup> grade SBAC test is supposed to be a good predictor, and why.

After sufficient testing of the SBAC 11<sup>th</sup> grade exam as predictor of actual readiness for credit bearing courses, SBAC may change its language to reflect the actual predictability the test possesses. This would be about 4 – 5 years down the road, after a scientific statistical analysis.

2. The Need for Placement Exams

A new bullet on ‘Multiple Measures of Content-Readiness’ (p. viii) reflects a bit more flexibility in judging students readiness for credit bearing courses and in student placement. However, as mentioned above the section on ‘College Content Readiness’ (see [1], p. v - viii) postulates consequences of the SBAC 11<sup>th</sup> grade exam that have no basis in research and/or experience: The recommendations of ‘exempt from developmental

courses work' and of not using placement exams for placing students in specific entry level college courses is premature. They also roll back years of experiences at large public universities with well-functioning placement exams that have increased student success rates and retention.

**We recommend** that Table 3 of [1] (together with some of the wording in this section) be changed to reflect the usefulness of mathematics placement exams. We also recommend that SBAC acknowledges the fact that some placement exams are very successful and that these should continue, i.e. they should not be replaced by the SBAC 11<sup>th</sup> grade exam.

### 3. Developmental (or Remedial) Courses

The publication used the term 'developmental course work' without defining which college course work is actually considered to be developmental (or remedial) and which is considered entry-level college work. The revised version actually defines "College Algebra" as a 'typical entry-level college mathematics ... course' (p. viii). An inspection of CCSS Mathematics (standards items only, not (+) items) shows that almost all of the material that is now included in a typical 'college algebra' course is contained in the CCSS. This would suggest that such a course should not be considered as 'credit bearing'. This contradiction needs to be clarified.

**We recommend** that 'developmental course work' be made specific, in particular with respect to courses like 'college algebra' and similar.

#### Summary

It appears that the policy authors tried to find one valid formulation for the many different situations that exist in SBAC states regarding college readiness, college preparation, placement, course content for courses with the same title, summary exams, etc. Obviously, this will not work as a policy guide: Specific students in specific situations need specific guidance and such guidance depends heavily on the specific situation in the states. With its 'one size fits all' approach SBAC may destroy valuable initiatives that exist in many states, and pass the political responsibility of explaining specific consequences to K-12 and higher education institutions in the states. The California state university system is often mentioned by SBAC administrators as the reason for specific interactions with higher education: It would be a serious mistake to model the entire high school to college transition in all SBAC states according to this one system. After all, not even the University of California system uses this model.

**We recommend** that SBAC investigates successful models of high school to college transition and writes guidance that actually serves individual students in the context of their state policies. It appears to us that much of early grade efforts are commendable, as is the formative assessment part of the SBAC plans. We also think that with serious content modifications (such as our earlier recommendations regarding geometry, probability and statistics, and trigonometry that are not reflected in the revised version) the 11<sup>th</sup> grade exam could deliver a good snapshot that can inform students about which courses they should be taking in 12<sup>th</sup> grade, relative to their career aspirations.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

- [1] Initial Achievement Level Descriptors and College Readiness Policy – Revised Version, SBAC, 2013
- [2] Common Core State Standards for Mathematics, Appendix A

### **Coverage of CCSS Topics**

As we argue below, and as others have argued before, the ALD document in its description of Grade 11 expectations is not sufficiently specific to allow for an assessment of the scope and potential impact of the SBAC 11<sup>th</sup> grade exam. If the ALDs remain in this state of vagueness, it is not clear what the exam actually will measure, and what possible consequences of such measurements may be. In particular, none of the claims in Table 5 on p.6 of [1] can be supported with what is known about the exam from this document.

**We recommend** that the Grade 11 descriptions in [1] (see p. 36 – 45) be made precise, in particular in Claims 2, 3, and 4. Furthermore, we recommend that the totality of SBAC 11<sup>th</sup> Grade exam questions cover all of the CCSS standard items (i.e. without (+) items), including geometry and trigonometric functions.

### **Some Detail Comments Regarding Claim 1, p. 36 – 41**

This part of [1] simply lists the main areas from CCSS, with some specific goals in Column 1. The descriptions in Column 5 (corresponding to Level 4) are generally quite vague and do not give a clear idea of what would be asked in the SBAC 11<sup>th</sup> Grade exam. Examples: “Level 4 students should be able to use properties of exponents to write equivalent forms of exponential functions.”(p. 36) This could be a very simple, but also a challenging problem, depending on the implementation. Or “Level 4 students should be able to rearrange polynomial, .... to highlight a quantity of interest and be able to analyze in context to determine which quantity is of interest.” (p. 37) Again, this is exceedingly vague and the level of intended student understanding cannot be gauged from this formulation.

The area of ‘geometry’ (p. 41) is not even called ‘geometry’ any more. It has only one ALD related right triangles. It is not clear if geometric (or other) questions will enter into consideration for Claims 2 – 4. This important area needs to be made precise before the ALD document [1] can be approved.

The area of ‘statistics and probability’ is still very underdeveloped: Level 4 student achievement descriptions only mention ‘interpret data to explain why a data value is an outlier’ (p. 39) None of the core data analysis skills are considered here. If ‘outliers’ is what statistics in CCSS boils down to, then we’ll need to have a discussion between SBAC and CCSS authors before we can continue with ALD plans of SBAC.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

**Some Detail Comments Regarding Claims 2 – 4, p. 42 – 45**

In these parts of [1] no specific content areas of the CCSS – Mathematics are given that will be used to test the claims. Hence it is not clear if content coverage for these claims will make up for inconsistencies and gaps in the ALDs for Claim 1, see above.

As we mentioned in Item 4 above, at the current level of development of the ALDs for the SBAC 11<sup>th</sup> grade exam it is really not clear what the scope and potential impact of the test might be. At this moment, Document [1] should not be approved.

SUBMITTED TO SBAC BY DIANA GONZALEZ  
ON BEHALF OF THE STATE OF IOWA PUBLIC HIGHER EDUCATION INSTITUTIONS  
COMMENTS ON REVISED ACHIEVEMENT LEVEL DESCRIPTORS  
FEBRUARY 21, 2013

HAWKEYE COMMUNITY COLLEGE

The first has to do with the format the assessments will take. It sounds as if students will not actually *produce* any writing because of the standardized test format, which we as writing faculty as well as our broader professional organizations, including the National Council of Teachers of English, have voiced objections to for years. (On the website [ncte.org](http://ncte.org) you'll find a position statement about writing assessment that captures the issues well.) We also heard at the recent articulation conference that students' ability to do public speaking will also not be assessed because of the difficulty of doing that in a standardized way, so a central aspect of that side of our discipline will not be taken into account. A university professor gave those as well as other examples of how this will probably shift the high school focus to match what will be easily assessed.

Our second concern then follows from the first and was discussed at the articulation conference in one of the discussion groups of which I was a part. With any high-stakes assessment in high schools, and this certainly qualifies, teachers will end up teaching to the test and therefore not teaching things that won't be assessed. In the case of our discipline, that will result in students being less prepared when they get to us rather than better prepared.