

Iowa Statewide Assessment of  
Student Progress (ISASP)  
Validity Report

Prediction of College Readiness

Prepared by Iowa Testing Programs  
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**ISASP**

IOWA STATEWIDE ASSESSMENT  
of STUDENT PROGRESS

## **Prediction of College Readiness**

The Iowa Statewide Assessment of Student Progress (ISASP) measures student achievement and understanding of the Iowa Core Standards in English Language Arts (ELA), Mathematics and Science. Indicators of student proficiency along with progress toward college and career readiness and growth from grade-to-grade are provided.

ISASP assesses students in English Language Arts and Mathematics for students in grades 3–11. The Science assessment is administered to students in grades 5, 8, and 10. The assessments, offered in both paper-and pencil and computer-based formats during the last quarter of the academic year, include multiple-choice and technology-enhanced items, constructed response items, and open-ended essay questions.

### **Evidence Based on Relations to Other Variables**

The *Standards for Educational and Psychological Testing* (2014) highlight that often the interpretation or use of a particular measure can be validated by comparison to other measures of the same or a related construct. Criterion validity relies upon the demonstration of a relationship between the test and an external criterion measure.

This study suggests that there is a strong relationship between performance on a state standards-based assessment (ISASP) and ACT. The ACT assesses content domains students must master to achieve college and career readiness. The main component of the ACT is a standardized battery of four tests of educational achievement—English, reading, mathematics, and science. High schools use ACT data in academic advising and counseling, evaluation studies, and accreditation documentation. Colleges use ACT results for admissions and course placement (ACT, 2020).

### **Correlations between ISASP and ACT**

Validity evidence supports the interpretation and use of test scores for a particular purpose. Assessment information is not considered valid or invalid in any absolute sense. Rather, the information is considered valid for a particular use or interpretation and invalid for another. A comprehensive approach to the collection of validity is an integral part of any assessment. Concurrent validity evidence is one critical piece of validity evidence as it summarizes the degree of similarity between two assessments taken in close proximity to one another. This evidence is presented in the form of correlations between scores on the ISASP and the ACT.

For these comparisons, students' scores from the 2019 ISASP were matched to their scores on the ACT for tests that measured similar content. A brief description of the content covered in each test is provided in Table 1. A more detailed description of the ISASP content can be found at <https://iowa.pearsonaccess.com/research/>.

Correlations were generated between the following tests: ISASP English Language Arts (ELA) to ACT English and ACT Reading, Mathematics to Mathematics, and Composite

to Composite. The correlations presented in Table 2 confirm the expected relationships between similar tests on the ISASP and the ACT. This supports evidence of convergent validity, as the general constructs of English, Reading and Mathematics are defined similarly on both tests.

**Table 1. Descriptions of ACT and ISASP Tests**

ISASP Scores	ISASP Tests	ACT Tests
<b>English Language Arts</b>	<b>Language/Writing</b> -- Measures student understanding of language structure and writing technique in areas such as style, word choice, linguistic conventions, and related aspects of the use of language to express thoughts and ideas. Also measures student ability to produce evidence-based writing that integrate ideas from source materials provided.  29 questions including multiple-choice items and a direct writing sample 60 Minutes	<b>English</b> -- Measures student understanding of English, production of writing and knowledge of language skills.  75 multiple-choice questions 45 Minutes
	<b>Reading</b> -- Measures student ability to identify key ideas and details and to interpret, evaluate, and integrate them with ideas expressed in other print material presented in context with the main passage.  28 questions including multiple-choice and open-ended items 60 Minutes	<b>Reading</b> -- Measures reading comprehension commonly encountered in first-year college curricula.  40 multiple-choice questions 35 Minutes
<b>Mathematics</b>	Measures the Iowa Core Standards in geometry, statistics and probability, functions, algebra, and numbers and quantity.  35 questions including multiple-choice and open-ended items 60 Minutes	Measures mathematical skills typically acquired in courses up to the beginning of grade 12.  60 multiple-choice questions 60 Minutes
<b>Composite</b>	Average of Mathematics (.5); Reading (.25) and Language/Writing (.25)	Average of Mathematics (.25); Reading (.25); English (.25) and Science (.25)

**Table 2. Correlations Between Student Standard Scores**

ACT Scores	ISASP Scores		
	Mathematics	English/Language Arts	Composite
Mathematics	0.86		
Reading		0.72	
English		0.76	
Composite			0.86

### **Development of the ISASP/ACT Concordance**

The term concordance refers to establishing a relationship between scores on assessments that measure similar constructs. The established relationship can be used to compare scores and inform decisions concerning student admissions, placement and achievement levels.

The sample of students used to develop the concordance tables took both the ISASP and the ACT. In the spring of 2019, 35,528 grade 11 students took the ISASP; 18,323 of these students also had ACT scores available. To establish the concordance between ISASP and ACT, an equipercentile method identified comparable scores on the two tests through a cumulative distribution function.

To provide a concordance between ACT Composite scores and ISASP, an ISASP Composite score was calculated that included Reading, Language/Writing, and Mathematics. ISASP Science is not administered in Grade 11 and therefore was not available for this study. ISASP Science is administered in Grade 10 to all Iowa students and will be studied for inclusion in future concordances.

Table 3 provides the concordances for the composite score as well as for reading and mathematics. The concordances are structured so that a user may quickly identify the range of ISASP scores that is associated with a particular ACT score. The range of ISASP scores for each corresponding ACT score is provided in Table 3 for the three concordances.

**Table 3. ACT Scores to ISASP Scores for Composite, Reading, and Mathematics**

Composite		Reading		Mathematics	
ACT	ISASP	ACT	ISASP	ACT	ISASP
36	775–800	36	770–800	36	791–800
35	755–774	35	731–769	35	781–790
34	741–754	34	707–730	34	766–780
33	727–740	33	688–706	33	756–765
32	717–726	32	678–687	32	745–755
31	707–716	31	670–677	31	735–744
30	699–706	30	664–669	30	725–734
29	691–698	29	659–663	29	716–724
28	683–690	28	655–658	28	704–715
27	674–682	27	649–654	27	687–703
26	665–673	26	644–648	26	672–686
25	656–664	25	639–643	25	659–671
24	647–655	24	633–638	24	647–658
23	639–646	23	624–632	23	637–646
22	630–638	22	614–623	22	628–636
21	620–629	21	603–613	21	620–627
20	609–619	20	593–602	20	612–619
19	599–608	19	584–592	19	604–611
18	588–598	18	575–583	18	594–603
17	577–587	17	566–574	17	578–593
16	565–576	16	557–565	16	558–577
15	551–564	15	546–556	15	538–557
14	537–550	14	534–545	14	520–537
13	522–536	13	520–533	13	509–519
12	510–521	12	505–519	12	499–508
11	498–509	11	489–504	11	491–498
10	487–497	10	477–488	10	482–490
9	476–486	9	470–476	9	471–481
8	460–475	8	460–469	8	460–470

Concordances and correlations are not expected to provide perfect predictions between ISASP and ACT scores. To help interpret these relationships, estimates of measurement error can be used to generate confidence intervals. Standard errors for ISASP can be found at: <http://iowa.pearsonaccessnext.com/Technical-Documentation/>.

## **Conclusions**

A variety of audiences may use the relationship between ISASP and ACT to help inform decisions about student achievement and readiness. Test scores provide information that complements other measures such as high school curriculum, grade point average, and advanced coursework. Multiple types of measures should always be used when evaluating student performance.

ISASP scores can provide information that would otherwise be missing for students who did not take the ACT. This study also suggests that ISASP scores can be helpful to all students in the state of Iowa as they consider postsecondary opportunities.

## **References**

ACT Technical Manual. (2020). Retrieved from [The ACT® Technical Manual](#).

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. Washington, DC: American Educational Research Association.