



Report of FCAT Concordance Studies

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State Board of Education
Meeting

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Concordance Studies Between the FCAT and Other Standardized Tests

Florida is one of the fastest growing states in the nation. This growth translates into more students in Florida's public schools, with many coming from states that do not have strong accountability systems to measure student achievement. Florida's school-aged population also includes an increasing number of non-English speaking students from other countries. The state's unique growth and student populations create a need to consider alternative ways for students to meet high academic standards.

Concordance Study

The 2003 Florida Legislature enacted HB 915 that requires the Department of Education to analyze national examinations taken by Florida students—the SAT, ACT, PSAT, and PLAN—to determine their score relationship to the high school Florida Comprehensive Assessment Test (FCAT). The SAT (a college entrance examination formerly known as the Scholastic Assessment Test, but now titled simply, SAT-I) and the PSAT (Preliminary SAT, offered typically at the 10th or 11th grade level) are products of The College Board. The PSAT is also used as an initial screening instrument for students participating in the National Merit Scholarship Program. The ACT (a college entrance examination formerly known the American College Test, but now titled simply, ACT) and PLAN (a test typically given in the 10th grade) are products of ACT, Inc. Florida has required either an SAT or an ACT score for admission to a state university since the mid-1970s. Since 2001 the state has provided funding for 10th graders to take either the PSAT or PLAN as a tool for evaluating college readiness and as an encouragement for students to take more rigorous courses in the 11th and 12th grades.

To meet this legislative requirement, the Department of Education conducted concordance studies to determine the score relationship between FCAT and each of the four national tests. Concordance studies are a recognized technical procedure for converting scores from one standardized test to another. Each of the concordance studies conducted by the Department was based on Florida students who had taken the FCAT in the spring of 2000 or 2001 and had also taken one of the

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national tests. The studies involved matching score reports for 71,118 students who had taken both the FCAT and the SAT; 47,682 who had taken both the FCAT and the ACT; 59,987 students who had taken both the FCAT and the PSAT; and 14,724 students who had taken both the FCAT and the PLAN. The studies employed a standard method for determining concordant scores, by which the score distributions of the two tests in question are compared, point by point, resulting in a matching of scores at the closest percentiles. The correlations between FCAT and the other tests were found to be positive and within the range of correlations between the SAT and ACT.

The FCAT tenth grade passing score approved by the State Board of Education is 300. Below are the concordant scores for an FCAT score of 300 (current passing score required for receiving a standard diploma) and the scores for seniors who are being grandfathered in (287 in reading and 295 in math). Tables are attached that show the concordance for a full range of the scores.

<u>Concordant Scores - FCAT and Other National Tests</u>			
Reading Scores		Math Scores	
FCAT Reading	SAT Verbal	FCAT Math	SAT Math
300-303	410	300-303	370
285-288	370	292-295	350
FCAT Reading	ACT Reading	FCAT Math	ACT Math
292-300	15	286-301	15
285-291	14		
FCAT Reading	PSAT Verbal	FACT Math	PSAT Math
296-300	37	297-302	34
284-289	34	292-296	33
FCAT Reading	PLAN Reading	FCAT Math	PLAN Math
293-304	14	299-313	15
282-292	13	285-298	14

Alignment of Sunshine State Standards with Assessments

If alternative tests are to be used, it is essential to assure that students are being assessed on the same standards as measured by the FCAT. Published reports by the testing companies compare Florida's Sunshine State Standards as measured by the SAT, PSAT, ACT and PLAN. An initial review of these alignment documents has been completed by curriculum and measurement staff in the Department. Although not perfectly aligned, the alignment documents indicate that these tests cover a majority of the Sunshine State Standards content assessed by FCAT. Staff will be conducting additional analyses of actual test items and reading passages before making a final recommendation.

SKILLS MEASURED BY FCAT, SAT, PSAT, ACT, AND PLAN

FCAT 10th grade tests

- Reading skills: words and phrases in context; main idea, plot, and purpose; comparisons and cause/effect; and reference and research.
- Math skills: number sense, concepts, and operations; measurement; geometry and spatial sense; algebraic thinking; and data analysis and probability.

SAT and PSAT

- Verbal test: critical reading, measuring students' ability to understand ideas as they are expressed through words, sentences, and paragraphs. Students are asked to read passages from the sciences, the social sciences, and the humanities.
- Math test: problem solving, using basic understanding of properties of numbers and basic concepts in algebra and geometry.

ACT and PLAN

- Reading test: measures the student's reading comprehension of four passages from prose fiction, the humanities, social sciences, and natural sciences.
- Math test: covers concepts and skills in algebra and geometry, with a few items in intermediate algebra and trigonometry.

Summary

Providing options for every high school student to meet high school exit examination requirements is consistent with the state's commitment to ensure that every child is prepared to enter post-secondary education or the world of work. Using the results of the concordance study as a basis upon which assessment options are established may ensure that every high school student has graduation exit options without lowering the state's academic standards.

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Reading and SAT Verbal Scores
Based on Students Who Took Both Tests
2000-2001
(N=71,118)

SAT Verbal Scores	FCAT Reading Scores	SAT Verbal Scores	FCAT Reading Scores
800	467-500	500	332-334
790	465-466	490	329-331
780	456-464	480	325-328
770	450-455	470	322-324
760	439-449	460	319-321
750	431-438	450	315-318
740	427-430	440	311-314
730	421-426	430	307-310
720	416-420	420	304-306
710	411-415	410	300-303
700	406-410	400	296-299
690	400-405	390	293-295
680	396-399	380	289-292
670	392-395	370	285-288
660	387-391	360	281-284
650	383-386	350	277-280
640	380-382	340	274-276
630	376-379	330	270-273
620	372-375	320	264-269
610	369-371	310	261-263
600	365-368	300	256-260
590	363-364	290	253-255
580	359-362	280	250-252
570	355-358	270	245-249
560	352-354	260	238-244
550	349-351	250	234-237
540	345-348	240	232-233
530	342-344	230	228-231
520	339-341	220	224-227
510	335-338	210	220-223
		200	100-219

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Math and SAT Math Scores
Based on Students Who Took Both Tests
2000-2001
(N=71,118)

SAT Math Scores	FCAT Math Scores	SAT Math Scores	FCAT Math Scores
760-800	500	450	330-332
750	449-499	440	326-329
740	441-448	430	322-325
730	433-440	420	319-321
720	425-432	410	314-318
710	415-424	400	312-313
700	410-414	390	308-311
690	405-409	380	304-307
680	401-404	370	300-303
670	396-400	360	296-299
660	393-395	350	292-295
650	389-392	340	288-291
640	386-388	330	283-287
630	383-385	320	279-282
620	380-382	310	274-278
610	377-379	300	270-273
600	374-376	290	267-269
590	372-373	280	260-266
580	369-371	270	258-259
570	366-368	260	251-257
560	364-365	250	245-250
550	360-363	240	242-244
540	358-359	230	236-241
530	355-357	220	233-235
520	352-354	210	227-232
510	349-351	200	100-226
500	346-348		
490	343-345		
480	339-342		
470	336-338		
460	333-335		

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Reading and
ACT Reading Scores
Based on Students Who Took Both Tests
2000-2001
(N=47,682)

ACT Reading Scores	FCAT Reading Scores
36	438-500
35	414-437
34	403-413
33	396-402
32	388-395
31	382-387
30	376-381
29	370-375
28	364-369
27	359-363
26	353-358
25	348-352
24	343-347
23	338-342
22	332-337
21	327-331
20	322-326
19	316-321
18	311-315
17	306-310
16	301-305
15	292-300
14	285-291
13	272-284
12	256-271
11	236-255
10	222-235
9	209-221
8	194-208
7	189-193
6	177-188
5	152-176
1-4	100-151

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Math and
ACT Math Scores
Based on Students Who Took Both Tests
2000-2001
(N=47,682)

ACT Math Scores	FCAT Math Scores
34-36	451-500
33	435-450
32	420-434
31	409-419
30	399-408
29	392-398
28	385-391
27	378-384
26	371-377
25	366-370
24	361-365
23	356-360
22	350-355
21	346-349
20	340-345
19	334-339
18	326-333
17	315-325
16	302-314
15	286-301
14	265-285
13	239-264
12	211-238
11	174-210
10	105-173
1-9	100-104

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Reading and PSAT Verbal Scores
 Based on Students Who Took Both Tests
 2000-2001
 (N=59,987)

Reading		Reading	
PSAT Verbal	FCAT	PSAT Verbal	FCAT
80	468-500	50	344-345
79	467	49	341-343
78	466	48	336-340
77	465	47	333-335
76	462-464	46	329-332
75	451-461	45	326-328
74	440-450	44	322-325
73	438-439	43	319-321
72	429-437	42	315-318
71	419-428	41	312-314
70	417-418	40	308-311
69	414-416	39	304-307
68	408-413	38	301-303
67	404-407	37	296-300
66	399-403	36	293-295
65	393-398	35	290-292
64	391-392	34	284-289
63	386-390	33	278-283
62	383-385	32	277
61	379-382	31	272-276
60	376-378	30	268-271
59	373-375	29	266-267
58	370-372	28	259-265
57	366-369	27	258
56	363-365	26	250-257
55	360-362	25	249
54	355-359	24	240-248
53	352-354	23	238-239
52	349-351	22	226-237
51	346-348	21	225
		20	100-224

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Math and PSAT Math Scores Based on Students Who Took Both Tests 2000-2001 (N=59,987)			
Math		Math	
PSAT	FCAT	PSAT	FCAT
73-80	464-500	46	341-344
72	449-463	45	339-340
71	435-448	44	337-338
70	426-434	43	334-336
69	423-425	42	330-333
68	413-422	41	326-329
67	407-412	40	322-325
66	402-406	39	318-321
65	397-401	38	315-317
64	394-396	37	310-314
63	391-393	36	308-309
62	387-390	35	303-307
61	384-386	34	297-302
60	381-383	33	292-296
59	378-380	32	290-291
58	376-377	31	283-289
57	373-375	30	278-282
56	370-372	29	276-277
55	367-369	28	268-275
54	365-366	27	265-267
53	362-364	26	256-264
52	359-361	25	252-255
51	357-358	24	243-251
50	354-356	23	239-242
49	351-353	22	229-238
48	348-350	20-21	100-228
47	345-347		

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Reading
and PLAN Reading Scores
Based on Students Who Took Both Tests
2000-2001
(N=14,724)

PLAN Reading Scores	FCAT Reading Scores
31	468-500
29-30	435-467
28	427-434
27	413-426
26	397-412
25	385-396
24	378-384
23	370-377
22	363-369
21	356-362
20	350-355
19	338-349
18	330-337
17	323-329
16	314-322
15	305-313
14	293-304
13	282-292
12	269-281
11	253-268
10	234-252
9	211-233
8	208-210
7	176-207
6	149-175
5	145-148
1-4	100-144

Concordance Studies Between the FCAT and Other Standardized Tests

Concordance Between the FCAT Math
and PLAN Math Scores
Based on Students Who Took Both Tests
2000-2001
(N=14,724)

PLAN Math Scores	FCAT Math Scores
31-32	500
30	446-499
29	427-445
28	413-426
27	401-412
26	393-400
25	386-392
24	380-385
23	375-379
22	369-374
21	364-368
20	359-363
19	350-358
18	341-349
17	331-340
16	314-330
15	299-313
14	285-298
13	272-284
12	262-271
11	252-261
10	241-251
9	227-240
8	225-226
7	202-224
6	178-201
1-5	100-177