ACT and Praxis CORE Comparisons

These data represent the ACT and Praxis Core scores of 152 teacher candidates. Lists of teacher candidates were gathered from Introduction to Education courses between Spring 2016 and the Spring 2018. The Director of Academic Research at VCSU was able to pull the ACT data available. While data on 152 candidates is beneficial to study, the overall mean and median scores is likely higher. The limitation of the data set is that it primarily consists of on-campus VCSU teacher candidates whose ACT scores were in the VCSU system. Transfer students from Wyoming and NDSU are not required to share their ACT scores for admission to VCSU. NDSU students need an ACT of 21 or higher to be accepted to the institution, hence the overall ACT would likely be higher if the scores for another 100 or more teacher candidates from the NDSU campus were included.

Intro Students: ACT and Praxis CORE Scores Spring 2016-Spring 2018

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	152	12	31	21.17	3.4
ACT English	152	10	34	20.33	4.7
ACT Math	152	15	36	21.58	4.2
ACT Reading	152	12	33	21.59	4.2
ACT Science	152	8	34	21.71	3.3
Core Reading	152	116	200	168.97	14.3
Core Writing	152	122	188	161.85	10.1
Core Math	152	110	200	161.23	19.8
Core Composite	152	366	584	492.06	35.6

Correlations among ACT exams and Praxis Core exams

A significant relationship** exists at the .01 level for each exam.

		ACT English	ACT Composite	ACT Math	ACT Reading	ACT Science	Core Reading	Core Writing	Core Math	Core Composite
ACT English	Pearson Correlation	1	.888**	.560**	.745**	.635**	.575**	.634**	.506**	.694**
	N	152	152	152	152	152	152	152	152	152
ACT Composite	Pearson Correlation	.888**	1	.760**	.851**	.798**	.594**	.566**	.631**	.751**
	N	152	152	152	152	152	152	152	152	152
ACT Math	Pearson Correlation	.560**	.760**	1	.457**	.545**	.383**	.369**	.757**	.681**
	N	152	152	152	152	152	152	152	152	152
ACT Reading	Pearson Correlation	.745**	.851**	.457**	1	.632**	.572**	.487**	.404**	.594**
	N	152	152	152	152	152	152	152	152	152
ACT Science	Pearson Correlation	.635**	.798**	.545**	.632**	1	.418**	.399**	.476**	.547**
	N	152	152	152	152	152	152	152	152	152
Core Reading	Pearson Correlation	.575**	.594**	.383**	.572**	.418**	1	.564**	.434**	.805**
	N	152	152	152	152	152	152	152	152	152
Core Writing	Pearson Correlation	.634**	.566**	.369**	.487**	.399**	.564**	1	.388**	.727**
	N	152	152	152	152	152	152	152	152	152
Core Math	Pearson Correlation	.506**	.631**	.757**	.404**	.476**	.434**	.388**	1	.842**
	N	152	152	152	152	152	152	152	152	152
Core Composite	Pearson Correlation	.694**	.751**	.681**	.594**	.547**	.805**	.727**	.842**	1
	N	152	152	152	152	152	152	152	152	152

** Correlation is significant at the 0.01 level (2-tailed).

Intro Students: Composite ACT Scores Lower than 18

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	15	12	17	**15.9**	1.5
ACT English	15	10	18	**13.8**	2.2
ACT Math	15	15	19	**16.1**	1.2
ACT Reading	15	12	21	**16.8**	3.0
ACT Science	15	8	20	**16.6**	3.3
Core Reading	15	140	190	**157.7**	13.4
Core Writing	15	138	166	**153.2**	8.8
Core Math	15	110	158	**130.0**	15.7
Core Composite	15	402	512	**440.9**	32.1

5 out of 15 (33.3%) teacher candidates met the Praxis Core requirement at the time of the data being collected.

Intro Students: Composite ACT Score of 18

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	15	18	18	**18.0**	.0
ACT English	15	13	20	**16.4**	2.1
ACT Math	15	16	22	**18.2**	1.6
ACT Reading	15	17	22	**18.9**	1.7
ACT Science	15	17	22	**19.3**	1.5
Core Reading	15	116	174	**159.8**	13.0
Core Writing	15	122	168	**155.2**	10.9
Core Math	15	128	180	**156.1**	13.2
Core Composite	15	366	500	**471.2**	31.1

13 out of 15 (86.6%) teacher candidates met the Praxis Core requirement at the time of the data being collected.

Intro Students: Composite ACT Score of 19

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	23	19	19	**19.0**	.0
ACT English	23	14	21	**17.4**	1.8
ACT Math	23	16	24	**18.9**	2.0
ACT Reading	23	15	22	**18.8**	1.7
ACT Science	23	16	24	**20.6**	2.0
Core Reading	23	138	180	**163.4**	10.7
Core Writing	23	134	170	**157.0**	9.0
Core Math	23	132	172	**151.0**	11.2
Core Composite	23	414	514	**471.5**	21.8

18 out of 23 (78.2%) teacher candidates met the Praxis Core requirement at the time of the data being collected.

Intro Students: Composite ACT Score of 20

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	21	20	20	**20.0**	.0
ACT English	21	16	22	**19.5**	1.8
ACT Math	21	17	26	**20.4**	2.7
ACT Reading	21	16	25	**20.6**	2.0
ACT Science	21	18	25	**20.7**	1.7
Core Reading	21	146	188	**168.1**	9.9
Core Writing	21	140	172	**160.3**	7.9
Core Math	21	140	182	**164.0**	11.8
Core Composite	21	442	518	**492.5**	19.8

19 out of 21 (90.4%) teacher candidates met the Praxis Core requirement at the time of the data being collected.

Intro Students: Composite ACT Score of 21

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	23	21	21	**21.0**	.0
ACT English	23	16	24	**20.3**	1.7
ACT Math	23	17	26	**22.5**	2.8
ACT Reading	23	16	24	**20.3**	2.0
ACT Science	23	18	25	**21.6**	2.0
Core Reading	23	142	194	**164.4**	12.3
Core Writing	23	148	180	**163.1**	7.6
Core Math	23	128	196	**162.7**	17.4
Core Composite	23	458	540	**490.3**	21.0

22 out of 23 (95.6%) teacher candidates met the Praxis Core requirement at the time of the data being collected.

Intro Students: Composite ACT Score of 22 or Higher

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	55	22	31	**24.9**	2.3
ACT English	55	18	34	**24.6**	4.2
ACT Math	55	17	36	**25.1**	3.7
ACT Reading	55	18	33	**25.6**	3.7
ACT Science	55	21	34	**24.5**	2.3
Core Reading	55	150	200	**179.0**	12.6
Core Writing	55	154	188	**168.0**	8.2
Core Math	55	138	200	**173.7**	16.7
Core Composite	55	472	584	**520.8**	25.3

55 out of 55 (100%) teacher candidates met the Praxis Core requirement at the time of the data being collected.

Snapshot of Praxis Core data on July 1, 2019

Initial pass rates, re-try pass rates, and disaggregation by program location

Core: Initial Pass Rates						
	VCSU (All)	VCSU (On Campus)	VCSU (Online)	NDSU	Wyoming	TBC
Test Count	479	325	154	296	158	24
Pass First	323	203	120	229	99	17
	67%	62%	78%	77%	63%	71%

	Count	Percentage
Pass Initially	668	70%
Initially Do Not Pass	289	30%
Pass after Re-try	191	
Still Not Passing At This Point	98	10%
Total Passing Count and Percentage	859	90%
Total Test Taken	957	

Praxis Core counts and mean scores disaggregated by major.

Core Out													
Core Test	Elem. Total	Pre-K Total	Bus. Total	PE Total	Sci. Total	Math Total	Music Total	Art Total	TE Total	Engl Total	SocS Total	Span. Total	Hlth Total
Reading	675	45	29	55	15	32	14	12	19	58	70	1	25
Writing	674	45	28	55	15	32	14	12	19	57	69	1	25
Math	674	45	29	55	15	32	14	12	19	57	69	1	25

Core Test	Elem. Mean	Pre-K Mean	Bus. Mean	PE Mean	Sci. Mean	Math Mean	Music Mean	Art Mean	TE Mean	Engl Mean	SocS Mean	Span. Mean	Hlth Mean
Reading	173.55	174.18	175.52	164.62	181.6	172.13	182.43	170.33	178.26	183.59	181.11	192	169.12
Writing	163.85	165.96	165.79	157.78	166.93	164.13	169.14	163.5	160.11	169.4	163.8	180	159.12
Math	160.23	160.18	171.03	153.71	177.47	183.31	174.29	158	165.21	159.58	161.57	180	154.4

Praxis Core Reading (5712), Writing (5722), and Mathematics (5732) breakdown scores by for the various areas for each exam.

Core Breakdown	Count	VCSU Mean %	State %	National %
Reading				
Key Ideas & Details	967	71%	75%	73%
Craft; Structure; Language Skills	967	69%	69%	69%
Integration of Knowledge & Ideas	967	69%	73%	68%
Writing				
Text Types; Purposes; Production	960	64%	64%	64%
Language and Research Skills for Writing	960	62%	64%	63%
Math				
Number & Quantity	963	71%	71%	63%
Algebra & Functions	963	67%	66%	60%
Geometry	958	56%	57%	51%
Statistics & Probability	963	70%	72%	64%

ACT and Praxis CORE Comparisons

These data represent the ACT and Praxis Core scores of student teachers between the Fall of 2017 and Spring of 2019. Not every transfer student or freshman is mandated to submit an ACT score to enter VCSU. Some took the SAT, some used their high school or college GPA to gain admission to VCSU. Haley Jenrich pulled ACT scores from as many student teachers as she could so we could do some research.

Student Teacher ACT Data

Student Teacher ACT Data Fall 2017- Spring 2019	N	Min	Max	Mean	Std. Deviation
ACT Composite Score	246	12	32	22.2	3.49
English ACT	246	10	35	21.8	4.58
Math ACT	246	14	36	22.3	4.02
Reading ACT	246	11	34	22.7	4.95
Science ACT	246	8	32	22.2	3.07

Student Teacher Praxis Core Data -All teacher candidates who student taught were required to meet the qualifying scores for the Praxis Core (100% Passing)

Student Teacher Praxis Core Data Fall 2017- Spring 2019	N	Min	Max	Mean	Std. Deviation
Core Reading 5712	363	138	200	176.7	13.63
Core Writing 5722	363	140	190	166.7	8.90
Core Math 5732	363	122	200	165.2	17.12
Core Composite Score	363	466	584	508.4	30.51

Correlations among ACT exams and Praxis Core exams

A significant relationship** exists at the .01 level for each exam.

Correlations

		Core Reading 5712	Core Writing 5722	Core Math 5732	Core Composite	Composite ACT	English ACT	Math ACT	Reading ACT	Science ACT
Core Reading 5712	Pearson Correlation	1	.440**	.412**	.800**	.629**	.594**	.368**	.617**	.430**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000
	N	363	363	363	363	246	246	246	246	246
Core Writing 5722	Pearson Correlation	.440**	1	.266**	.634**	.573**	.587**	.322**	.530**	.443**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000
	N	363	363	363	363	246	246	246	246	246
Core Math 5732	Pearson Correlation	.412**	.266**	1	.818**	.544**	.401**	.652**	.361**	.434**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000
	N	363	363	363	363	246	246	246	246	246
Core Composite	Pearson Correlation	.800**	.634**	.818**	1	.754**	.664**	.626**	.631**	.566**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000
	N	363	363	363	363	246	246	246	246	246
Composite ACT	Pearson Correlation	.629**	.573**	.544**	.754**	1	.871**	.755**	.884**	.774**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000
	N	246	246	246	246	246	246	246	246	246
English ACT	Pearson Correlation	.594**	.587**	.401**	.664**	.871**	1	.521**	.769**	.573**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000
	N	246	246	246	246	246	246	246	246	246
Math ACT	Pearson Correlation	.368**	.322**	.652**	.626**	.755**	.521**	1	.500**	.550**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000
	N	246	246	246	246	246	246	246	246	246
Reading ACT	Pearson Correlation	.617**	.530**	.361**	.631**	.884**	.769**	.500**	1	.611**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000
	N	246	246	246	246	246	246	246	246	246
Science ACT	Pearson Correlation	.430**	.443**	.434**	.566**	.774**	.573**	.550**	.611**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	
	N	246	246	246	246	246	246	246	246	246

**. Correlation is significant at the 0.01 level (2-tailed).

Student Teachers: Composite ACT Scores Lower than 18

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	14	12	17	15.8	1.8
ACT English	14	10	11	14.4	2.0
ACT Math	14	14	21	16.2	1.7
ACT Reading	14	11	20	15.8	3.1
ACT Science	14	8	21	16.7	3.1
Core Reading	14	148	184	165.3	9.3
Core Writing	14	154	172	160.9	4.8
Core Math	14	132	174	149.6	13.2
Core Composite	14	466	496	475.6	9.5
Overall Mean for Student Teaching Ratings	14	2.56	4.00	3.58	0.42

Student Teachers: Composite ACT Scores = 18

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	12	18	18	18.0	0.0
ACT English	12	13	20	16.1	2.9
ACT Math	12	16	23	20.0	3.1
ACT Reading	12	14	19	17.1	1.6
ACT Science	12	18	21	19.6	0.9
Core Reading	12	158	180	164.2	6.0
Core Writing	12	154	174	160.0	6.9
Core Math	12	138	180	155.6	10.7
Core Composite	12	468	500	479.7	11.4
Overall Mean for Student Teaching Ratings	12	3.00	4.00	3.51	0.32

Student Teachers: Composite ACT Scores = 19

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	29	19	19	19.0	0.0
ACT English	29	14	21	18.4	1.8
ACT Math	29	16	23	18.2	2.2
ACT Reading	29	14	23	18.5	2.1
ACT Science	29	18	24	20.6	1.6
Core Reading	29	152	182	167.3	7.5
Core Writing	29	140	170	159.3	7.3
Core Math	29	132	176	156.2	11.5
Core Composite	29	466	523	482.6	13.9
Overall Mean for Student Teaching Ratings	29	1.90	4.00	3.25	0.50

Student Teachers: Composite ACT Scores = 20

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	33	20	20	20.0	0.0
ACT English	33	15	24	19.8	1.8
ACT Math	33	16	26	20.4	2.2
ACT Reading	33	16	23	20.0	2.1
ACT Science	33	16	26	21.0	1.6
Core Reading	33	146	186	166.3	7.5
Core Writing	33	140	178	161.9	7.3
Core Math	33	142	182	161.6	11.5
Core Composite	33	466	514	489.8	13.9
Overall Mean for Student Teaching Ratings	33	2.41	4.00	3.41	0.45

Student Teachers: Composite ACT Scores = 21

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	36	21	21	21.0	0.0
ACT English	36	16	23	20.5	1.6
ACT Math	36	15	26	21.6	2.7
ACT Reading	36	17	25	20.4	2.4
ACT Science	36	18	25	21.6	1.9
Core Reading	36	146	188	171.1	11.0
Core Writing	36	140	178	165.2	6.9
Core Math	36	142	188	162.9	15.2
Core Composite	36	466	534	499.1	20.7
Overall Mean for Student Teaching Ratings	36	2.57	4.00	3.45	0.39

Student Teachers: Composite ACT Scores = 22 or higher

	N	Minimum	Maximum	Mean	Std. Deviation
ACT Composite	122	22	32	25.0	2.4
ACT English	122	16	35	24.9	3.8
ACT Math	122	18	36	24.9	3.1
ACT Reading	122	19	34	26.5	3.7
ACT Science	122	16	32	24.0	2.6
Core Reading	122	148	200	182.8	12.0
Core Writing	122	148	188	170.8	8.5
Core Math	122	132	200	173.2	16.9
Core Composite	122	468	576	525.7	27.0
Overall Mean for Student Teaching Ratings	122	1.76	4.00	3.35	0.48

Student Teachers: Composite ACT Summary Chart

	ACT<18 Mean Scores N=14	ACT=18 Mean Scores N=12	ACT=19 Mean Scores N=29	ACT=20 Mean Scores N=33	ACT=21 Mean Scores N=36	ACT > 21 Mean Scores N=122
ACT Composite	15.8	18.0	19.0	20.0	21.0	25.0
ACT English	14.4	16.1	18.4	19.8	20.5	24.9
ACT Math	16.2	20.0	18.2	20.4	21.6	24.9
ACT Reading	15.8	17.1	18.5	20.0	20.4	26.5
ACT Science	16.7	19.6	20.6	21.0	21.6	24.0
Core Reading	165.3	164.2	167.3	166.3	171.1	182.8
Core Writing	160.9	160.0	159.3	161.9	165.2	170.8
Core Math	149.6	155.6	156.2	161.6	162.9	173.2
Core Composite	475.6	479.7	482.6	489.8	499.1	525.7
Overall Mean for Student Teaching Ratings	3.58	3.51	3.25	3.41	3.45	3.35

While Composite ACT and Composite Core scores have a significant relationship, ACT scores do not correlate with student teacher ratings.

Cumulative GPA also has a significant correlation with the ACT and Praxis Core exams, but the ACT and Praxis Core exams do not have a significant relationship with student teacher final evaluation mean scores. **Only GPA also has a significant relationship with student teacher final evaluations**.

Correlations

		Core Reading 5712	Core Writing 5722	Core Math 5732	Core Composite	Composite ACT	English ACT	Math ACT	Reading ACT	Science ACT	Cumulative GPA	Overall Mean for Student Teaching Ratings
Core Reading 5712	Pearson Correlation	1	.440**	.412**	.800**	.629**	.594**	.368**	.617**	.430**	.188**	-.001
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.989
	N	363	363	363	363	246	246	246	246	246	363	363
Core Writing 5722	Pearson Correlation	.440**	1	.266**	.634**	.573**	.587**	.322**	.530**	.443**	.246**	.019
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.719
	N	363	363	363	363	246	246	246	246	246	363	363
Core Math 5732	Pearson Correlation	.412**	.266**	1	.818**	.544**	.401**	.652**	.361**	.434**	.192**	-.015
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.783
	N	363	363	363	363	246	246	246	246	246	363	363
Core Composite	Pearson Correlation	.800**	.634**	.818**	1	.754**	.664**	.626**	.631**	.566**	.255**	-.010
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.847
	N	363	363	363	363	246	246	246	246	246	363	363
Composite ACT	Pearson Correlation	.629**	.573**	.544**	.754**	1	.871**	.755**	.884**	.774**	.364**	-.009
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000	.889
	N	246	246	246	246	246	246	246	246	246	246	246
English ACT	Pearson Correlation	.594**	.587**	.401**	.664**	.871**	1	.521**	.769**	.573**	.388**	.035
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.580
	N	246	246	246	246	246	246	246	246	246	246	246
Math ACT	Pearson Correlation	.368**	.322**	.652**	.626**	.755**	.521**	1	.500**	.550**	.176**	-.051
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.006	.430
	N	246	246	246	246	246	246	246	246	246	246	246
Reading ACT	Pearson Correlation	.617**	.530**	.361**	.631**	.884**	.769**	.500**	1	.611**	.362**	.031
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.623
	N	246	246	246	246	246	246	246	246	246	246	246
Science ACT	Pearson Correlation	.430**	.443**	.434**	.566**	.774**	.573**	.550**	.611**	1	.291**	-.004
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.949
	N	246	246	246	246	246	246	246	246	246	246	246
Cumulative GPA	Pearson Correlation	.188**	.246**	.192**	.255**	.364**	.388**	.176**	.362**	.291**	1	.171**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.006	.000	.000		.001
	N	363	363	363	363	246	246	246	246	246	363	363
Overall Mean for Student Teaching Ratings	Pearson Correlation	-.001	.019	-.015	-.010	-.009	.035	-.051	.031	-.004	.171**	1
	Sig. (2-tailed)	.989	.719	.783	.847	.889	.580	.430	.623	.949	.001	
	N	363	363	363	363	246	246	246	246	246	363	363

**. Correlation is significant at the 0.01 level (2-tailed).

Student Teacher Evaluation Ratings and Cumulative GPA: Fall 2017-Spring 2019
Between the Fall of 2017 and Spring of 2019, 363 student teacher placements have yielded a mean score of 3.35 on a four-point scale with half-points. (Possible ratings: 4, 3.5, 3, 2.5, 2, 1.5, 1)

Distinguished (4)	(3.5)	Proficient (3)	(2.5)	Emerging (2)	(1.5)	Underdeveloped (1)

Fall 2017- Spring 2019	GPA range 2.50-2.74	GPA range 2.75-2.99	GPA range 3.00-3.24	GPA range 3.25-3.49	GPA range 3.50-3.74	GPA range 3.75-4.00	Overall N =
Count N=363	9	31	45	75	78	125	**363**
Mean scores for the groups							
Student Teacher Final Evaluation Ratings (Mean)	**2.99**	**3.28**	**3.30**	**3.35**	**3.38**	**3.40**	**3.35**

A significant correlation exists between overall mean scores for teacher candidates and cumulative GPA. Individual results for student teachers continue to vary. Almost every faculty member can name a teacher candidate with a lower GPA who excelled during his or her student teaching experience, and almost every faculty member can think of an honor student who did not shine during student teaching. Examples that are contrary to the data exist. The overall data continue to indicate a significant correlation (p<.01) exists between GPA and cooperating teacher final evaluations. As a whole, candidates with higher GPAs have received higher ratings from cooperating teachers.

Correlations

		Overall Mean for Student Teaching Ratings	Cumulative GPA
Overall Mean for Student Teaching Ratings	Pearson Correlation	1	.171**
	Sig. (2–tailed)		.001
	N	363	363
Cumulative GPA	Pearson Correlation	.171**	1
	Sig. (2–tailed)	.001	
	N	363	363

**. Correlation is significant at the 0.01 level (2–tailed).

Student teacher final evaluations did not have a significant correlation with Praxis Core exams (Reading, Writing, Mathematics) or the Praxis II content or pedagogy exams.