

iSkills & Proficiency Profile (PP) Report

Descriptive Statistics & Correlations

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iSkills and Proficiency Profile (PP): Description

iSkills:

iSkills is an assessment of Information and Communications Technology (ICT) literacy skills. The exam is designed to measure and validate advanced critical thinking skills in a scenario-based, technological context. The test has questions that simulate real-world scenarios. Knowledge of the topics and ability to manipulate technology are needed to complete tasks such as extracting information from a database, developing a spreadsheet, or composing an email based on research findings. The iSkills assessment does not have multiple-choice questions.

iSkills tests students' ability to navigate, critically evaluate and make sense of the wealth of information available through digital technology is measured. The content areas measured are:

Technology Topics:

- Web Use – Email, Instant Messaging, Bulletin Board Postings, Browser Use, Search Engines
- Database Management – Data Searches, File Management
- Software – Word Processing, Spreadsheet, Presentations, Graphics

Total number of students who took iSkills : 216

Proficiency Profile:

The Proficiency Profile measures proficiency in critical thinking, reading, writing and mathematics in the context of humanities, social sciences and natural sciences. It also assesses the academic skills developed, as opposed to subject knowledge taught, in general education courses. Questions on the Proficiency Profile are multiple choice and are arranged in blocks of three to eight.

In addition to a total score, proficiency classifications (proficient, marginal or not proficient) measure how well your students have mastered each level of proficiency within three skill areas:

- Reading/Critical Thinking
- Writing
- Mathematics
- Humanities
- Social sciences
- Natural Sciences

Total number of students who took Proficiency Profile: 50

Proficiency Profile - Essay:

PP essay is a constructed-response type test, which is an optional component added to gain the additional insight into students' general knowledge and critical thinking and writing skills.

Total number of students who took the essay part: 33

iSkills and Proficiency Profile : Summary

Number of Students	iSkills	Proficiency Profile
Total	216	50
Above Cutoff	112	32

iSkills- Descriptive Statistics

N	Valid	216
	Missing	31
Mean		255.32
Std. Error of Mean		5.755
Median		260.00
Mode		330
Std. Deviation		84.578
Variance		7153.383
Skewness		-.131
Std. Error of Skewness		.166
Kurtosis		-.611
Std. Error of Kurtosis		.330
Range		390
Minimum		60
Maximum		450
Sum		55150
Percentiles	25	200.00
	50	260.00
	75	327.50

PP- Descriptive Statistics

N	Valid	50
	Missing	197
Mean		452.00
Std. Error of Mean		3.580
Median		456.00
Mode		400 ^a
Std. Deviation		25.315
Variance		640.857
Skewness		-.435
Std. Error of Skewness		.337
Kurtosis		-.407
Std. Error of Kurtosis		.662
Range		97
Minimum		400
Maximum		497
Sum		22600
Percentiles	25	435.50
	50	456.00
	75	470.25

iSkills- Descriptive Statistics (By School)

SCHOOL		Statistic	Std. Error	
iSkills	ARC	N=7		
		Mean	352.86	15.074
		95% Confidence Interval for Mean	315.97	
		Lower Bound	389.74	
		Upper Bound	353.73	
		5% Trimmed Mean	360.00	
		Median	1590.476	
		Variance	39.881	
		Std. Deviation	290	
		Minimum	400	
		Maximum	110	
		Range	70	
		Interquartile Range	-.669	.794
		Skewness	-.786	1.587
Kurtosis				
CCS	CCS	N=68		
		Mean	252.79	10.492
		95% Confidence Interval for Mean	231.85	
		Lower Bound	273.74	
		Upper Bound	253.30	
		5% Trimmed Mean	260.00	
		Median	7486.106	
		Variance	86.522	
		Std. Deviation	90	
		Minimum	450	
		Maximum	360	
		Range	158	
		Interquartile Range	-.139	.291
		Skewness	-.823	.574
Kurtosis				
NCE	NCE	N=96		
		Mean	251.67	8.843
		95% Confidence Interval for Mean	234.11	
		Lower Bound	269.22	
		Upper Bound	252.04	
		5% Trimmed Mean	240.00	
		Median	7506.667	
		Variance	86.641	
		Std. Deviation	60	
		Minimum	430	
		Maximum	370	
		Range	128	
		Interquartile Range	-.094	.246
		Skewness	-.384	.488
Kurtosis				
NMT	NMT	N=4		
		Mean	300.00	30.277
		95% Confidence Interval for Mean	203.65	
		Lower Bound	396.35	
		Upper Bound	298.89	
		5% Trimmed Mean	290.00	
		Median	3666.667	
		Variance	60.553	
		Std. Deviation	240	
		Minimum	380	
		Maximum	140	
		Range	115	
		Interquartile Range	.811	1.014
		Skewness	.072	2.619
Kurtosis				

SLA	N=12			
	Mean		21.828	
	95% Confidence Interval for Mean	Lower Bound	251.12	
		Upper Bound	347.21	
	5% Trimmed Mean		302.96	
	Median		315.00	
	Variance		5717.424	
	Std. Deviation		75.614	
	Minimum		140	
	Maximum		390	
	Range		250	
	Interquartile Range		123	
	Skewness		.637	
	Kurtosis		1.232	
SOM	N=29			
	Mean		11.886	
	95% Confidence Interval for Mean	Lower Bound	201.17	
		Upper Bound	249.86	
	5% Trimmed Mean		225.96	
	Median		220.00	
	Variance		4097.044	
	Std. Deviation		64.008	
	Minimum		90	
	Maximum		350	
	Range		260	
	Interquartile Range		90	
	Skewness		-.434	
	Kurtosis		.845	

PP- Descriptive Statistics (By School)

SCHOOL		Statistic	Std. Error	
PP	ARC	N=7		
		Mean	2.890	
		95% Confidence Interval for Mean	Lower Bound	459.07
			Upper Bound	473.22
		5% Trimmed Mean	466.10	
		Median	468.00	
		Variance	58.476	
		Std. Deviation	7.647	
		Minimum	456	
		Maximum	477	
		Range	21	
		Interquartile Range	14	
		Skewness	.794	
		Kurtosis	1.587	
	CCS	N=9		
		Mean	9.964	
		95% Confidence Interval for Mean	Lower Bound	436.13
			Upper Bound	482.09
		5% Trimmed Mean	460.07	
		Median	456.00	
		Variance	893.611	
		Std. Deviation	29.893	
		Minimum	404	
		Maximum	497	
		Range	93	
		Interquartile Range	49	
		Skewness	.717	
		Kurtosis	1.400	

NCE	N=8					
	Mean			455.38	8.573	
	95% Confidence Interval for Mean		Lower Bound		435.10	
			Upper Bound		475.65	
	5% Trimmed Mean			457.08		
	Median			460.00		
	Variance			587.982		
	Std. Deviation			24.248		
	Minimum			400		
	Maximum			480		
	Range			80		
	Interquartile Range			18		
	Skewness			-1.979	.752	
Kurtosis			4.911	1.481		
SLA	N=9					
	Mean			460.44	8.485	
	95% Confidence Interval for Mean		Lower Bound		440.88	
			Upper Bound		480.01	
	5% Trimmed Mean			460.72		
	Median			463.00		
	Variance			648.028		
	Std. Deviation			25.456		
	Minimum			426		
	Maximum			490		
	Range			64		
	Interquartile Range			51		
	Skewness			-.257	.717	
Kurtosis			-1.882	1.400		
SOM	N=16					
	Mean			433.75	5.004	
	95% Confidence Interval for Mean		Lower Bound		423.08	
			Upper Bound		444.42	
	5% Trimmed Mean			433.89		
	Median			436.50		
	Variance			400.600		
	Std. Deviation			20.015		
	Minimum			400		
	Maximum			465		
	Range			65		
	Interquartile Range			34		
	Skewness			-.380	.564	
Kurtosis			-.824	1.091		

a. There are no valid cases for PP when SCHOOL = .000. Statistics cannot be computed for this level.

b. PP is constant when SCHOOL = NMT. It has been omitted.

iSkills-Correlation (all variables)

N=73

		iSkills	ACCUMGPA	SAT_TOTAL	HSRANK	GENDER	ETHNICITY
iSkills	Pearson Correlation	1	.257*	.559**	.348**	-.006	-.112
	Sig. (2-tailed)		.028	.000	.003	.957	.347
	Sum of Squares and Cross-products	355268.493	76890.685	402978.082	35097.945	-13.288	-267.260
	Covariance	4934.285	1067.926	5596.918	487.471	-.185	-3.712
ACCUMGPA	Pearson Correlation	.257*	1	.359**	.386**	-.036	-.136
	Sig. (2-tailed)	.028		.002	.001	.763	.251
	Sum of Squares and Cross-products	76890.685	252003.507	218331.781	32758.479	-62.233	-273.973
	Covariance	1067.926	3500.049	3032.386	454.979	-.864	-3.805
SAT_TOTAL	Pearson Correlation	.559**	.359**	1	.487**	-.108	-.155
	Sig. (2-tailed)	.000	.002		.000	.364	.190
	Sum of Squares and Cross-products	402978.082	218331.781	1463863.014	99734.658	-450.548	-752.877
	Covariance	5596.918	3032.386	20331.431	1385.204	-6.258	-10.457
HSRANK	Pearson Correlation	.348**	.386**	.487**	1	.297*	-.119
	Sig. (2-tailed)	.003	.001	.000		.011	.315
	Sum of Squares and Cross-products	35097.945	32758.479	99734.658	28647.562	173.699	-81.082
	Covariance	487.471	454.979	1385.204	397.883	2.412	-1.126
GENDER	Pearson Correlation	-.006	-.036	-.108	.297*	1	-.139
	Sig. (2-tailed)	.957	.763	.364	.011		.240
	Sum of Squares and Cross-products	-13.288	-62.233	-450.548	173.699	11.918	-1.932
	Covariance	-.185	-.864	-6.258	2.412	.166	-.027
ETHNICITY	Pearson Correlation	-.112	-.136	-.155	-.119	-.139	1
	Sig. (2-tailed)	.347	.251	.190	.315	.240	
	Sum of Squares and Cross-products	-267.260	-273.973	-752.877	-81.082	-1.932	16.110
	Covariance	-3.712	-3.805	-10.457	-1.126	-.027	.224

*. Correlation is significant at the 0.05 level (2-tailed).

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

a. Listwise N=73

PP-Correlation (all variables)

N=12

		PP	ACCUMGPA	SAT_TOTAL	HSRANK	GENDER	ETHNICITY
PP	Pearson Correlation	1	.287	.611*	.417	.268	-.441
	Sig. (2-tailed)		.367	.035	.177	.399	.152
	Sum of Squares and Cross-products	10100.917	6691.500	22012.500	3648.250	46.083	-57.167
	Covariance	918.265	608.318	2001.136	331.659	4.189	-5.197
ACCUMGPA	Pearson Correlation	.287	1	-.061	.610*	-.430	-.050
	Sig. (2-tailed)	.367		.850	.035	.163	.877
	Sum of Squares and Cross-products	6691.500	54005.000	-5105.000	12344.500	-170.500	-15.000
	Covariance	608.318	4909.545	-464.091	1122.227	-15.500	-1.364
SAT_TOTAL	Pearson Correlation	.611*	-.061	1	.036	.355	-.529
	Sig. (2-tailed)	.035	.850		.912	.257	.077
	Sum of Squares and Cross-products	22012.500	-5105.000	128625.000	1122.500	217.500	-245.000
	Covariance	2001.136	-464.091	11693.182	102.045	19.773	-22.273
HSRANK	Pearson Correlation	.417	.610*	.036	1	.059	.236
	Sig. (2-tailed)	.177	.035	.912		.856	.461
	Sum of Squares and Cross-products	3648.250	12344.500	1122.500	7576.250	8.750	26.500
	Covariance	331.659	1122.227	102.045	688.750	.795	2.409
GENDER	Pearson Correlation	.268	-.430	.355	.059	1	-.378
	Sig. (2-tailed)	.399	.163	.257	.856		.226
	Sum of Squares and Cross-products	46.083	-170.500	217.500	8.750	2.917	-.833
	Covariance	4.189	-15.500	19.773	.795	.265	-.076
ETHNICITY	Pearson Correlation	-.441	-.050	-.529	.236	-.378	1
	Sig. (2-tailed)	.152	.877	.077	.461	.226	
	Sum of Squares and Cross-products	-57.167	-15.000	-245.000	26.500	-.833	1.667
	Covariance	-5.197	-1.364	-22.273	2.409	-.076	.152

*. Correlation is significant at the 0.05 level (2-tailed).

a. Listwise N=12

PP-Correlation (by sub-components)

		PP	PP-Critical Thinking	PP-Reading	PP-Writing	PP-Mathematics	PP-Humanities	PP-Social Sciences	PP-Natural Sciences	GPA	SAT
PP	Pearson Correlation	1	.937**	.950**	.919**	.893**	.925**	.928**	.939**	.386*	.594**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.032	.000
	Sum of Squares and Cross-products	22507.097	5956.774	7343.774	4873.419	6395.774	5908.290	6191.323	5779.194	18801.290	73669.355
	Covariance	750.237	198.559	244.792	162.447	213.192	196.943	206.377	192.640	626.710	2455.645
PP-Critical Thinking	Pearson Correlation	.937**	1	.883**	.813**	.743**	.936**	.913**	.935**	.376*	.638**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.037	.000
	Sum of Squares and Cross-products	5956.774	1796.194	1927.194	1218.355	1502.194	1689.323	1722.581	1625.548	5165.323	22374.839
	Covariance	198.559	59.873	64.240	40.612	50.073	56.311	57.419	54.185	172.177	745.828
PP-Reading	Pearson Correlation	.950**	.883**	1	.826**	.823**	.912**	.949**	.936**	.336	.552**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.065	.001
	Sum of Squares and Cross-products	7343.774	1927.194	2654.194	1504.355	2024.194	1999.323	2175.581	1977.548	5616.323	23524.839
	Covariance	244.792	64.240	88.473	50.145	67.473	66.644	72.519	65.918	187.211	784.161
PP-Writing	Pearson Correlation	.919**	.813**	.826**	1	.806**	.795**	.780**	.845**	.391*	.495**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.030	.005
	Sum of Squares and Cross-products	4873.419	1218.355	1504.355	1249.484	1359.355	1196.258	1226.065	1225.839	4484.258	14473.871
	Covariance	162.447	40.612	50.145	41.649	45.312	39.875	40.869	40.861	149.475	482.462
PP-Mathematics	Pearson Correlation	.893**	.743**	.823**	.806**	1	.765**	.774**	.783**	.453*	.435*
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.011	.014
	Sum of Squares and Cross-products	6395.774	1502.194	2024.194	1359.355	2278.194	1553.323	1644.581	1533.548	7011.323	17184.839
	Covariance	213.192	50.073	67.473	45.312	75.940	51.777	54.819	51.118	233.711	572.828
PP-Humanities	Pearson Correlation	.925**	.936**	.912**	.795**	.765**	1	.876**	.875**	.324	.638**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.075	.000
	Sum of Squares and Cross-products	5908.290	1689.323	1999.323	1196.258	1553.323	1811.871	1659.968	1527.581	4475.871	22458.065
	Covariance	196.943	56.311	66.644	39.875	51.777	60.396	55.332	50.919	149.196	748.602
PP-Social Sciences	Pearson Correlation	.928**	.913**	.949**	.780**	.774**	.876**	1	.901**	.386*	.541**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.032	.002
	Sum of Squares and Cross-products	6191.323	1722.581	2175.581	1226.065	1644.581	1659.968	1979.742	1644.645	5578.968	19914.516
	Covariance	206.377	57.419	72.519	40.869	54.819	55.332	65.991	54.822	185.966	663.817
PP-Natural Sciences	Pearson Correlation	.939**	.935**	.936**	.845**	.783**	.875**	.901**	1	.383*	.560**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.033	.001
	Sum of Squares and Cross-products	5779.194	1625.548	1977.548	1225.839	1533.548	1527.581	1644.645	1682.387	5098.581	19008.710
	Covariance	192.640	54.185	65.918	40.861	51.118	50.919	54.822	56.080	169.953	633.624
GPA	Pearson Correlation	.386*	.376*	.336	.391*	.453*	.324	.386*	.383*	1	.317
	Sig. (2-tailed)	.032	.037	.065	.030	.011	.075	.032	.033		.083
	Sum of Squares and Cross-products	18801.290	5165.323	5616.323	4484.258	7011.323	4475.871	5578.968	5098.581	105271.871	84948.065
	Covariance	626.710	172.177	187.211	149.475	233.711	149.196	185.966	169.953	3509.062	2831.602
SAT	Pearson Correlation	.594**	.638**	.552**	.495**	.435*	.638**	.541**	.560**	.317	1
	Sig. (2-tailed)	.000	.000	.001	.005	.014	.000	.002	.001	.083	
	Sum of Squares and Cross-products	73669.355	22374.839	23524.839	14473.871	17184.839	22458.065	19914.516	19008.710	84948.065	683870.968
	Covariance	2455.645	745.828	784.161	482.462	572.828	748.602	663.817	633.624	2831.602	22795.699

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

* . Correlation is significant at the 0.05 level (2-tailed).

a. Listwise N=31

Correlation (PP-iSkills)

		iSkills	PP
iSkills	Pearson Correlation	1	.762**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	120596.875	26735.625
	Covariance	3890.222	862.440
PP	Pearson Correlation	.762**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	26735.625	10199.875
	Covariance	862.440	329.028

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

a. Listwise N=32

APPENDIX-I

Descriptive Statistics- PP Components

PP-Critical Thinking

N	Valid	50
	Missing	197
Mean		112.90
Std. Error of Mean		1.022
Median		113.50
Mode		103 ^a
Std. Deviation		7.226
Variance		52.214
Skewness		.002
Std. Error of Skewness		.337
Kurtosis		-.703
Std. Error of Kurtosis		.662
Range		27
Minimum		100
Maximum		127
Sum		5645
Percentiles	25	106.75
	50	113.50
	75	118.00

PP-Reading

N	Valid	50
	Missing	197
Mean		118.64
Std. Error of Mean		1.216
Median		121.00
Mode		126
Std. Deviation		8.599
Variance		73.949
Skewness		-.615
Std. Error of Skewness		.337
Kurtosis		-.786
Std. Error of Kurtosis		.662
Range		30
Minimum		100
Maximum		130
Sum		5932
Percentiles	25	112.00
	50	121.00
	75	126.00

PP-Writing

N	Valid	50
	Missing	197
Mean		114.50
Std. Error of Mean		.866
Median		115.00
Mode		115
Std. Deviation		6.125
Variance		37.520
Skewness		-.803
Std. Error of Skewness		.337
Kurtosis		.128
Std. Error of Kurtosis		.662
Range		24
Minimum		100
Maximum		124
Sum		5725
Percentiles	25	110.75
	50	115.00
	75	119.00

PP-Mathematics

N	Valid	50
	Missing	197
Mean		119.32
Std. Error of Mean		1.097
Median		120.50
Mode		127
Std. Deviation		7.755
Variance		60.140
Skewness		-.714
Std. Error of Skewness		.337
Kurtosis		-.214
Std. Error of Kurtosis		.662
Range		29
Minimum		101
Maximum		130
Sum		5966
Percentiles	25	114.00
	50	120.50
	75	127.00

PP-Humanities

N	Valid	50
	Missing	197
Mean		116.06
Std. Error of Mean		1.070
Median		116.00
Mode		110 ^a
Std. Deviation		7.566
Variance		57.241
Skewness		-.191
Std. Error of Skewness		.337
Kurtosis		-.856
Std. Error of Kurtosis		.662
Range		28
Minimum		101
Maximum		129
Sum		5803
Percentiles	25	110.00
	50	116.00
	75	122.00

PP-Social Sciences

N	Valid	50
	Missing	197
Mean		114.90
Std. Error of Mean		1.082
Median		115.00
Mode		110 ^a
Std. Deviation		7.649
Variance		58.500
Skewness		-.110
Std. Error of Skewness		.337
Kurtosis		-.800
Std. Error of Kurtosis		.662
Range		30
Minimum		100
Maximum		130
Sum		5745
Percentiles	25	110.00
	50	115.00
	75	121.00

PP-Natural Sciences

N	Valid	50
	Missing	197
Mean		116.70
Std. Error of Mean		1.042
Median		118.00
Mode		122
Std. Deviation		7.371
Variance		54.337
Skewness		-.285
Std. Error of Skewness		.337
Kurtosis		-.606
Std. Error of Kurtosis		.662
Range		30
Minimum		100
Maximum		130
Sum		5835
Percentiles	25	110.00
	50	118.00
	75	122.00

PP-Essay

N	Valid	33
	Missing	214
Mean		4.27
Std. Error of Mean		.181
Median		4.00
Mode		4 ^a
Std. Deviation		1.039
Variance		1.080
Skewness		-1.125
Std. Error of Skewness		.409
Kurtosis		2.222
Std. Error of Kurtosis		.798
Range		5
Minimum		1
Maximum		6
Sum		141
Percentiles	25	4.00
	50	4.00
	75	5.00

