

COMET Spring 2016 Statistical Exploration by High School

This document is an exploration of data from the College of Micronesia-FSM spring 2016 entrance COMET with a focus on individual high school and section statistics. In this document the word "sections" refers to high school sections. The word subsection will be used to refer to the different sections of the COMET entrance instrument. This document should be construed as an occasional informal paper by a member of faculty. Any opinions expressed are solely those of the author and do not reflect an official position of the college.

Basic Statistics for All Candidates

The COMET consists of four subsections: a written essay, a vocabulary test, a comprehension test, and a mathematics placement test. Total possible for the essay is 50 points. The mathematics subsection has four sets of ten problems designed to help place students. The total possible for the sum of the mathematics scores is 40. Nelson-Denny is used for the vocabulary and comprehension sections.

Statistic	Essay	Voc	Comp	MS095	MS096	MS099	MS100	Math
n	1438	1438	1438	1438	1438	1438	1437	1438
min	0	0	0	0	0	0	0	2
max	50	71	37	10	10	10	10	40
mode	30	19	15	10	3	2	2	14
median	33	23	17	8	5	3	3	18
mean	31.72	25.10	17.74	7.26	4.93	3.60	3.17	18.95
sx	12.17	10.82	6.83	2.45	2.41	2.38	2.00	7.52
cv	0.38	0.43	0.38	0.34	0.49	0.66	0.63	0.40

Correlations	Essay	Voc	Comp	MS095	MS096	MS099	MS100	Math
Essay	1.00	0.56	0.63	0.54	0.52	0.39	0.34	0.56
Vocab	0.56	1.00	0.71	0.41	0.50	0.49	0.45	0.57
Comp	0.63	0.71	1.00	0.52	0.57	0.51	0.42	0.62
Math sum	0.56	0.57	0.62	0.80	0.86	0.83	0.75	1.00

This year the statistics for the Upward Bound program participants on Pohnpei and the Talent Search Program participants on Pohnpei are included in the main tables of this report.

High School Listing

The following is a list of the high school names used in tables in this report. For historical reasons, some tables and charts may differ.

School	School Long	State
Berea	Berea	Chuuk
CCA	Calvary Christian Academu	Pohnpei
CHS	Chuuk High School	Chuuk
CSC	Chuuk State Campus	Chuuk
Faichuk	Faichuuk High School	Chuuk
KHS	Kosrae High School	Kosrae
KSC	Kosrae State Campus	Kosrae
MHS	Madolehnihmw High School	Pohnpei
NMHS	Nanpei Memorial High School	Pohnpei
Nukuno	Nukuno High School	Chuuk
OICA	Ohwa International Christian Academy	Pohnpei
OIHS	Outer Island High School	Yap
OLMCHS	Our Lady of Mercy High School	Pohnpei
PICS	Pohnpei Islands Central School	Pohnpei
PLHA	Pentecostal Lighthouse Academy	Chuuk
PSC	Pohnpei State Campus	Pohnpei
SCA	Saramen Chuuk Academy	Chuuk
SDA-C	Seventh Day Adventist Chuuk	Chuuk
SDA-P	Seventh Day Adventist Pohnpei	Pohnpei
SDA-Y	Seventh Day Adventist Yap	Yap
SNHS-Fefan	Southern Noumeneas Fefan	Chuuk
SNHS-Tonoas	Southern Noumeneas Tonoas	Chuuk
TSP	Talent Search Program Pohnpei	Pohnpei
UB	Upward Bound Pohnpei	Pohnpei
Xavier	Xavier High School	Chuuk
YCHS	Yap Catholic High School	Yap
YHS	Yap High School	Yap
YSC	Yap State Campus	Yap

High schools, sections, campuses, programs in descending rank order on the four subsections

The following table lists the high schools in descending rank order of the average (statistical mean) for each of the four subsections of the COMET: essay, vocabulary, reading, and mathematics. High school averages without a section specified are averages for all candidates at the school. High schools with a section code following the name are averages for that section. Section codes are those chosen by the high school. For Madolehnihw High School the major codes are used instead of the section codes.

HS/program	Essay	HS/program	Vocab	HS/program	Comp	HS/program	Math
Xavier	48.61	CCA	44.47	YCHS	30.44	UB	32.65
YCHS	47.31	YCHS	44.44	Xavier	28.83	NMHS A1	32.00
CCA	42.53	NMHS A1	43.56	CCA	28.05	YCHS	31.50
UB	42.30	Xavier	43.00	SDA-P	26.56	MHS A1	31.41
SDA-P	41.28	NMHS AG	39.67	UB	25.91	KHS A	28.29
KHS A	40.83	UB	39.13	OLMCHS	25.46	Xavier	27.85
SDA-Y	40.58	SDA-P	36.06	KHS A	25.42	TSP	26.80
NMHS A1	40.47	NMHS	36.03	SDA-Y	24.50	OLMCHS	26.13
NMHS A2	39.63	NMHS A2	35.94	MHS A1	23.23	NMHS A2	26.00
MHS A1	39.14	OLMCHS	34.29	KHS B	22.32	KHS B	25.74
SCA	37.59	SDA-Y	33.50	NMHS A1	22.13	NMHS	25.37
KHS C	37.57	TSP	31.12	KHS C	20.71	SDA-P	25.16
NMHS B	37.33	CHS A	31.07	KHS	19.17	MHS	23.76
YHS	37.20	NMHS B	30.07	NMHS A2	19.03	MHS A2	23.57
OLMCHS	36.58	MHS A1	29.82	CHS A	19.00	MHS BU	22.90
NMHS	36.52	OIHS	27.35	YHS	18.88	NMHS B	21.60
CHS A	36.44	KHS A	27.33	TSP	18.71	Berea	20.95
TSP	36.41	YHS	26.54	KHS D	18.26	MHS TI	20.54
KHS B	35.26	KHS B	25.68	MHS BU	18.15	KHS	20.51
KSC	34.93	NMHS TIHA	24.78	MHS	18.10	KSC	20.21
PSC	34.21	Nukuno	24.00	PICS	18.06	NMHS AG	20.13
MHS BU	33.90	YSC	23.91	NMHS	17.89	CCA	19.95
MHS AG	32.75	KHS C	23.86	KSC	17.71	NMHS TIHA	19.89
CSC	32.53	PSC	23.46	OICA	17.36	SDA-Y	19.83
MHS	32.08	PICS	23.43	YSC	17.21	YHS	19.51
PICS	31.88	OICA	23.18	SCA	16.94	PICS	19.39
YSC	31.83	CSC	22.56	MHS A2	16.76	SCA	19.28

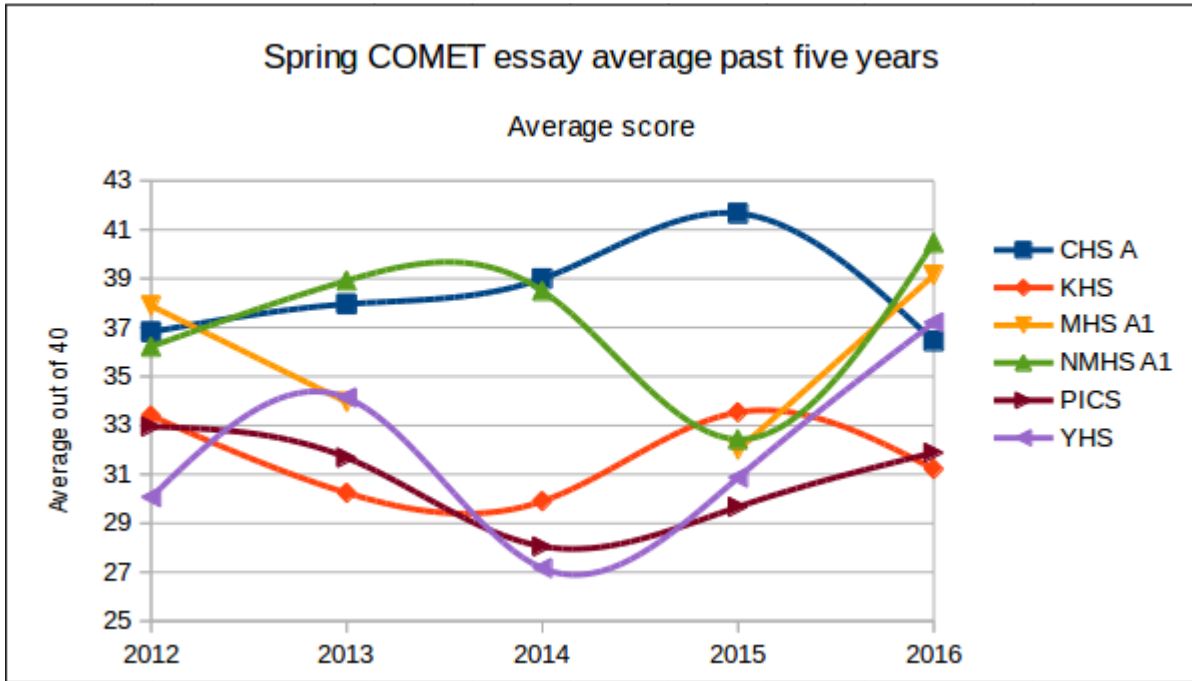
HS/program	Essay	HS/program	Vocab	HS/program	Comp	HS/program	Math
KHS	31.22	MHS	22.41	PSC	16.45	MHS AG	19.25
NMHS TIHA	30.33	KHS	22.22	OIHS	16.25	KHS C	18.57
OICA	30.27	MHS BU	21.90	KHS E	16.09	KHS D	18.43
MHS A2	29.29	MHS A2	21.38	MHS AG	16.00	PSC	17.91
Berea	28.95	KHS D	20.74	Berea	15.77	MHS HA	17.00
Nukuno	28.83	SCA	20.72	CSC	15.44	OICA	16.91
MHS HA	28.60	Berea	20.68	MHS TI	15.38	KHS E	16.82
KHS D	28.52	KSC	20.21	NMHS AG	15.33	YSC	16.02
OIHS	28.00	KHS E	19.73	PLHA	15.00	CHS A	15.00
NMHS AG	27.47	PLHA	19.40	NMHS B	14.27	KHS F	14.85
MHS TI	27.08	MHS AG	19.00	MHS HA	14.20	OIHS	14.60
KHS E	26.00	CHS	18.80	Nukuno	14.17	CSC	14.41
KHS F	22.45	MHS HA	17.80	MHS AU	13.33	Nukuno	13.67
CHS	20.78	MHS TI	17.77	KHS F	13.30	SDA-C	12.00
PLHA	20.00	KHS F	17.45	NMHS TIHA	13.28	MHS AU	12.00
SDA-C	20.00	SDA-C	16.00	CHS	12.33	CHS	11.14
MHS AU	13.33	SNHS-Tonoas	15.94	SNHS-Tonoas	10.00	PLHA	10.80
SNHS-Tonoas	13.12	Faichuk	15.70	SNHS-Fefan	9.48	SNHS-Tonoas	9.76
SNHS-Fefan	12.90	MHS AU	15.67	Faichuk	9.40	SNHS-Fefan	9.67
Faichuk	7.80	SNHS-Fefan	14.81	SDA-C	9.00	Faichuk	8.60

Essay year-on-year for selected high schools

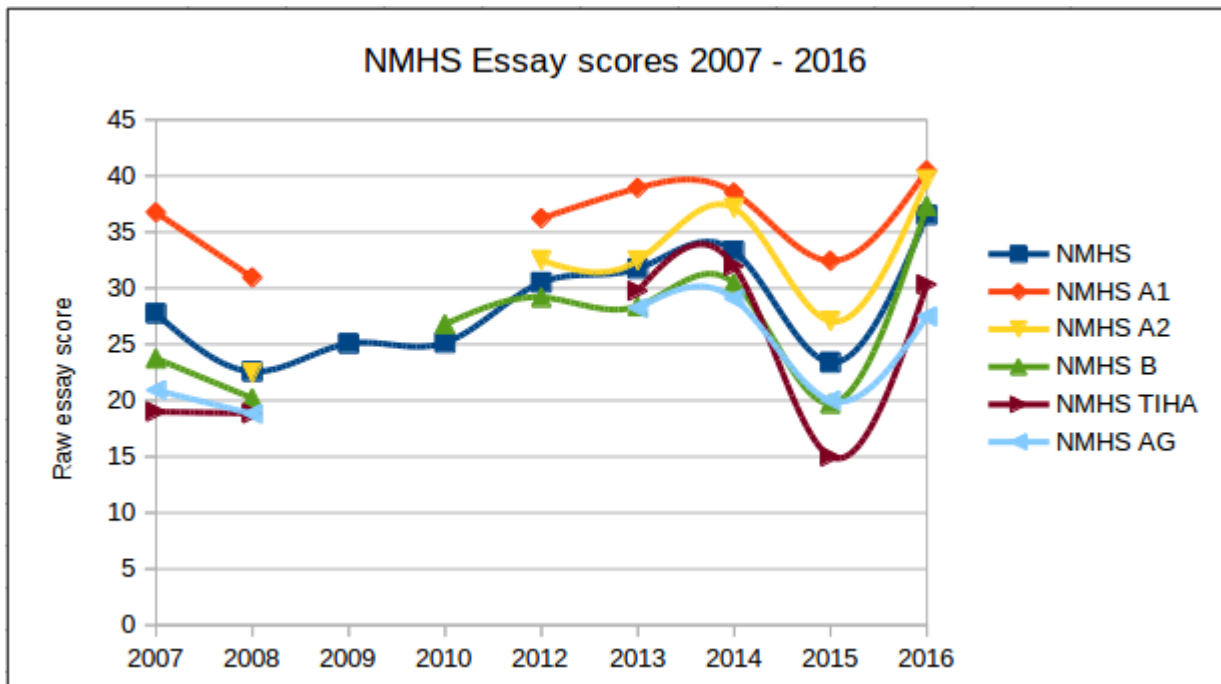
The essay subsection is marked by two graders. The rubric produces a maximum of 25 points. The scores for the two graders are added, producing a score out of 50. The following table provides information for high schools on their year-on-year performance including selected sections. Note that the college does not admit based solely on essay performance.

Spring: Essay	2012	2013	2014	2015	2016
Berea	27.21	25.63	28.73	38.22	28.95
CCA	46.82	37.25	41.29	44.80	42.53
CHS	18.41	22.44	16.8	20.54	20.78
CHS A	36.82	37.96	39	41.67	36.44
CHS not A			12.3	17.11	18.33
Faichuk	4.87	4.84	1.81	12.33	7.80
KHS	33.39	30.24	29.9	33.53	31.22
MHS	29.86	30.6	30.84	28.13	32.08
MHS A1	37.89	33.95		32	39.14
MHS A2	32.11	28.57		29.3	29.29
MHS BU				28	33.90
NMHS	30.51	31.74	33.3	23.39	36.52
NMHS A1	36.22	38.92	38.5	32.43	40.47
NMHS A2	32.48	32.46	37.13	27.05	39.63
NMHS B	29.18	28.4	30.44	19.73	37.33
NMHS TIHA		29.76	31.97	15.00	30.33
NMHS AG		28.22	29.05	20.00	27.47
Nukuno	30.56		9.64	16.00	28.83
OICA	34.17	30.7	30.55	31.24	30.27
OIHS	21.41		29.62	29.78	28.00
OLMCHS	35.17	42.59	42.48	44.58	36.58
PICS	32.95	31.68	28.05	29.67	31.88
PLHA	27.86	21.04	16.94	26.38	20.00
SCA	32.89	36.63	33.56	37.85	37.59
SDA-C	25.62	30.7	33.6	37.38	20.00
SDA-P	43.24	39.32	41.68	39.69	41.28
SDA-Y	42.2	33.14	41.4	40.40	40.58
SNHS-Fefan	13.32	15.76	21.36	12.08	12.90
SNHS-Tonoas	7.52	12.87	12.88	12.79	13.12

Spring: Essay	2012	2013	2014	2015	2016
Xavier	43.24	43.98	42.66	47.13	48.61
YCHS			44.67	46.50	47.31
YHS	30.06	34.13	27.16	30.86	37.20
Overall	27.54	27.6	27.06	28.28	31.72



Essay score averages over a five year period for selected public high school sections. Where no section is specified, section level data was not available and the overall school average was used.



Specific data request chart for NMHS essay scores over time

Program admissions numbers by high schools and sections

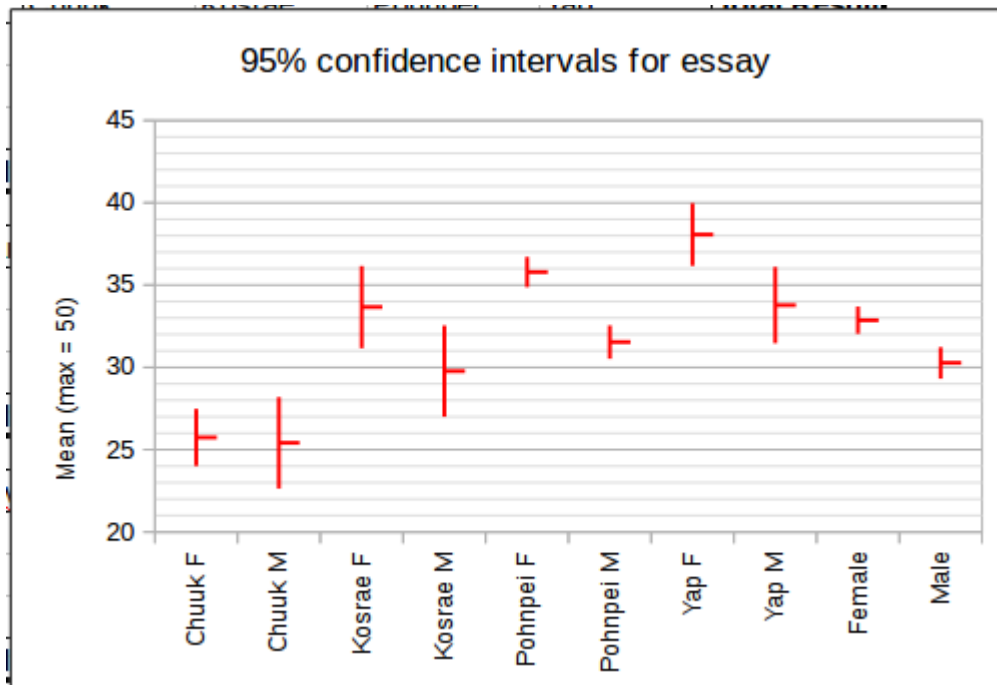
State	School	Section	Non-Admit	Certificate	ACE	Degree	Total
Chuuk	Berea	Berea	6	7	8	1	22
	CHS	CHS	125	40	4	3	172
		CHS A		9	10	8	27
	CSC	CSC	8	16	7	3	34
	Faichuk	Faichuk	9	1			10
	Nukuno	Nukuno	2	3	1		6
	PLHA	PLHA	2	1	1	1	5
	SCA	SCA	5	9	11	7	32
	SDA-C	SDA-C	1				1
	SNHS-Fefan	SNHS-Fefan	18	2	1		21
	SNHS-Tonoas	SNHS-Tonoas	16	1			17
	Xavier	Xavier		1		40	41
Chuuk			192	90	43	63	388
Kosrae	KHS	KHS (unk sxn)	2	1			3
		KHS A			4	20	24
		KHS B		3	5	11	19
		KHS C		4	3	7	14
		KHS D	5	8	7	3	23
		KHS E	6	9	5	2	22
		KHS F	13	5	2		20
	KSC	KSC	1	4	5	4	14
Kosrae			27	34	31	47	139
Pohnpei	CCA	CCA			3	16	19
	MHS	MHS A1		1	5	16	22
		MHS A2	1	11	8	1	21
		MHS AG	1	2	4	1	8
		MHS AU	2	1			3
		MHS BU	2	6	6	6	20
		MHS HA	1	4			5
		MHS TI	4	6	3		13
	NMHS	NMHS A1		2	10	20	32
		NMHS A2		9	11	15	35

State	School	Section	Non-Admit	Certificate	ACE	Degree	Total
		NMHS AG	5	5	3	2	15
		NMHS B	2	6	6	1	15
		NMHS TIHA	6	7	4	1	18
	OICA	OICA	5	1	2	3	11
	OLMCHS	OLMCHS	1	2	3	18	24
	PICS	PICS	47	106	81	76	310
	PSC	PSC	9	50	35	14	108
	SDA-P	SDA-P		2	6	24	32
Pohnpei			86	221	190	214	711
Yap	OIHS	OIHS	8	4	4	4	20
	SDA-Y	SDA-Y		2	2	8	12
	YCHS	YCHS				16	16
	YHS	YHS	12	23	31	39	105
	YSC	YSC	6	20	9	12	47
Yap			26	49	46	79	200
Overall			331	394	310	403	1438

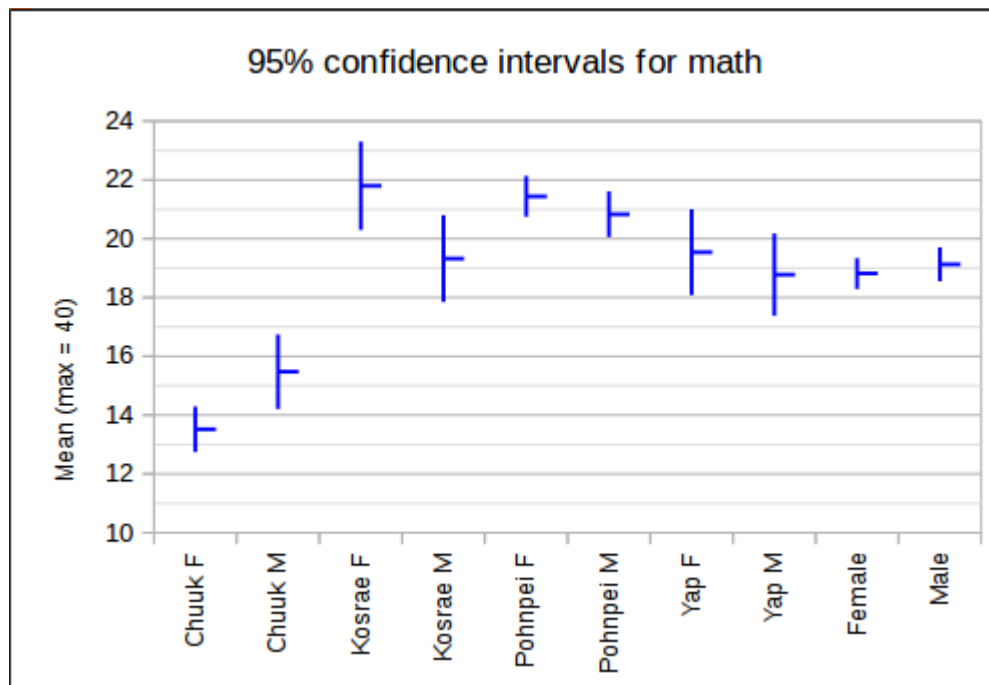
Program	Non-Admit	Certificate	ACE	Degree	Total
TSP	3	12	15	19	49
UB		1	2	20	23
Overall	331	394	310	403	1438

Gender performance on the essay and math sections by state

The data set this year included gender information making a look at gender differentials by state, if any, possible. The following charts are 95% confidence intervals for the mean as sliced by gender and state. The last pair are national means separated by gender.



Note the y-axis does not start at zero, exaggerating small differences in the means. Although two states (Pohnpei and Yap) indicate a significance difference in gender performance, the effect size is small. The significant difference for Pohnpei is a product of the large sample size. For Yap, the large standard deviations yield a small effect size in spite of arguing that the difference is meaningful. Significant, but not ultimately meaningful. Nationwide the difference is significant but the effect size is small (0.21) and thus also not meaningful. Again, significance is the product of the large sample size.



In mathematics the differences are not significant. Note the altered y-axis does not start at zero, exaggerating the small differences in the means.

There are effectively no gender differentials at either the state level nor at the national level.

Acknowledgements

The author thanks the College of Micronesia-FSM for their providing the data that forms the basis of this report. The author is also in debt to the departments of education and principals who have shared the section lists that make this report possible.

Author and contact information

All errors are solely those of the author. This document should be construed as an occasional informal paper by a member of faculty. Any opinions expressed would be solely those of the author and do not reflect an official position of the college. Please contact Dana Lee Ling at dleeling@comfsm.fm or 691-320-2480 extension 228 if you have questions, corrections, or unmet data needs in regards the COMET instrument. If there is break-out aggregate data you require such as class level data not broken out above, please send the author a list of the names of the students/candidates and the author can generate the aggregate statistics for those students/candidates.

Originally produced on 17 May 2016. Gender data added 26 May 2016. Kosrae High School sections added 10 July 2016.