Caldwell, Jeff

This is the first installment of our "Stats of the Week" as it relates to the Effective Written Communication Assessment measure. Throughout this process, I will try to regularly provide analyses that provides each of us with information to better enable us to understand who our students are, how they think, and what they do. Ultimately, it is hoped we can use this to improve our students' success rates.

Backdrop

- The writing assessment measure consisted of 25 objective questions where students had to read a sentence and identify whether or not it had any grammatical errors. In essence, they identified the sentence as "correct" or "incorrect". The other 75 points possible on the assessment consisted of the students writing a paragraph to describe their educational goals and how they were going to achieve them. The instructions encouraged them to write as if they were applying for a scholarship.

The Analyses (level 1)

- 361 students completed at least part of the assessment
- The mean age was 26.29; the mean # of RSC hours completed was 23.41; and the mean # of hours currently enrolled in was 10.63.
- The percentage of the possible points on the objective portion was 59.63 and the percentage on the subjective portion was 48.16. Some students only completed the objective portion, so their score for the subjective part was excluded.
- The overall mean score on the assessment for 336 completed assessments was 50.52. with a median of 49, and a standard deviation of 19.97 (fairly large sd).
- The high score was 93, with four students scoring in the 90s, 17 in the 80s, 58 in the 70s; 46 in the 60s, and the remainder below 60. The distribution of grades was fairly symmetric (mesokurtic to be precise) and non-skewed.

The Details

- The scores above should not be viewed negatively, for several reasons. First, all measures of learning are imprecise. They are not perfect measures of student's knowledge or abilities. Second, many of the students, in this instance, lacked the incentive to do their best work. The measure was not part of their class grade, so many did not put forth maximum effort. Lastly, when we write, we usually are allowed time to proofread, edit, correct, and rewrite before we submit our final document. These students did not have that opportunity.
- An interesting anomaly occurred, in one particular history class, 11 students completed the measure, 8 scored 70 or higher, and one made a 92 and another made a 93. What was it about this class, group of students, or instructor that caused this to occur? Can it be replicated in other sections? Did all students have this ability to begin with?
- We performed a comparative analysis where we evaluated 49 writing assignments in three different courses that were turned in for a grade to provide us some idea as to the impact motivation may have had on the student scores. These papers were assigned a grade by their professors, may or may not have been evaluated for grammatical accuracy, and students were given the opportunity to work on them from home. The average score on this comparative group was 75.16, with a median of 83, and a sd of 25.66. This indicated to us that there were measurement errors inherent in the instrument. We discussed ways to adjust for the error, but decided to leave the scores unadjusted.

Future Analyses
- I have completed several analyses where I have compared scores across various categories – divisions, courses, genders, and many more. I will share that information in the next installment.

The Discussion
- What can we do to improve the measure, improve student's writing abilities, and encourage students to do their best work on this assessment and in all classes? I hope each division will discuss these issues when given the opportunity.
- We will be holding workshops in the future on how to incorporate effective writing skills across the curriculum.
- I would recommend you encourage students to practice quality writing at every opportunity.

Until next time...

Regards

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for Academic Affairs

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Caldwell, Jeff

I believe you are correct.

Sent from my iPhone

On Apr 13, 2013, at 7:30 PM, "Trosper, Nan E." <ntrosper@rose.edu> wrote:

> The "neither" on high school diplomas probably means that the students are concurrent and haven't graduated yet.
>
> **From:** Caldwell, Jeff
> **Sent:** Thu 4/11/2013 10:42 AM
> **To:** Faculty Mailboxes - Adjunct; Faculty Mailboxes - Full-Time
> **Cc:** Hendrix, Frances; Britton, Terry; Webb, Jeanie R.; Cain, John M.
> **Subject:** Assessment Stats of the Week: Effective Written Communication
>
> Greetings
>
> Summarizing the findings to this point on the Written Communication Assessment (all students):
>
> Mean score = 50.52
> Median = 49
> Sd = 19.97
> n = 336
>
> While these scores are not impressive, I had discussed the shortcomings of the measure last week. There were several demographic and categorical variables that were available that allowed for some comparisons to be made. Do understand that these comparisons fall short of the requirements for any inferences to be made.

Day classes (n = 202)	Night classes (n = 134)	Comment
Mean = 52.69	47.24	I was surprised by this finding. I expected night students to do better, overall. Again, we cannot make any conclusions.
Median = 50.5	46	
Sd = 19.19	20.75	

Regular Faculty (n = 189)	Adjunct (n = 147)	I had no idea what to expect here.
Mean = 51.85	48.40	
Median = 50.5	48	
Sd = 19.15	20.93	

Male (n = 141)	Female (n = 192)	

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Mean = 48.45	52.12
Median = 47.5	49.75
Sd = 19.65	20.0

Caucasian (n = 217)	Black (60)	Hispanic (13)	Asian (4)	Nat. Amer. (14)	Multi (23)
		This is interesting.			
Mean = 51.77	44.68	46.23	53.25	52.19	55..59
Median = 50.5	41.25	43.5	54.5	46.25	60.00
Sd = 19.70	19.70	18.96	26.51	18.14	21.94

Single (n = 223)	Divorced (20)	Married (91)	
			Married students have historically scored higher. Tell you students to get married and their grades will improve.
Mean = 50.44	45.13	51.72	
Median = 48.5	45.00	50.00	
Sd = 19.98	19.81	19.81	

HS Diploma (294)	GED (27)	Neither (13)	
			Neither? I am assuming these are home schooled kids?? If anyone has any explanation, please share.
Mean = 50.23	45.07	66.23	
Median = 49.00	34	72.50	
Sd = 19.49	21.94	19.99	

Complete English Comp I (277)	Not Completed English Comp I (57)	
would hope.		This is as we
Mean = 50.86	48.79	
Median = 49.5	48.00	
Sd = 19.81	20.44	

This is what I am calling Level II analyses. Level III will involve looking at multiple categories...Single males/females versus married males/females, and on and on. Eventually, I will complete various discriptives for ages and correlation analysis.

Keep thinking about written communication skills. Ultimately, we will be repeating this measure and we are looking for dramatic increases in our student's writing skills.

John Carl and I are open to any suggested analyses, comments, or suggestions.

Many thanks for your help.

Jeff Caldwell
Associate Vice President
for Academic Affairs

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Caldwell, Jeff

Greetings to all

Below you will find this week's Effective Writing Assessment analyses for your review. Understand, this information is for all to review and ponder, not just your Assessment Committee. As you review these data, if you have a question regarding another comparison, send it to me and I would be happy to analyze the data according to your interests.

This week's installment of your Effective Writing Assessment update begins to delve much deeper into group comparisons. I only am reporting the analyses that demonstrated some interesting differences. I know you will find these equally interesting. Be aware, I performed far more analyses than what is listed below so I am sparing you the less exciting analyses.

Below you will see the breakdown of the scores on the paragraph we asked students to write. The paragraph was evaluated on five criteria – Paragraph Development, Paragraph Organization, Major Sentence Errors, Grammatical/Spelling Errors, and Writing Style. The possible range of scores was 0 – 5. If a student did not write a paragraph, they were not included in the analysis. As displayed, students performed poorly in the paragraph development area, but did relatively well in their sentence error component. Overall, student's scores were similar to the overall average of approximately 50% of possible points on 3 of 5 of the components.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ParDevScr	336	.00	5.00	1.5074	1.84814
ParOrgScr	336	.00	5.00	2.5432	1.86893
MajorErrors	336	.00	5.00	4.3065	1.36636
OtherErrors	336	.00	5.00	2.5878	2.21303
WritingStyle	336	.00	5.00	2.9107	1.63800
Valid N (listwise)	336				

Now, analyzing the students total score (0 – 100 scale) across gender and race, the data do demonstrate some differences.

	Gender			
	Male		Female	
	Mean	Count	Mean	Count

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Race			Male Mean	Male Count	Female Mean	Female Count
	Caucasian	TotScore	49.86	104	53.42	128
	Black	TotScore	43.43	25	45.97	39
	Hispanic	TotScore	40.71	8	52.67	7
	Asian	TotScore	54.50	4	52.00	2
	Native American	TotScore	38.33	3	55.95	11
	Hawaiian	TotScore	30.50	1	22.50	1
	Multi	TotScore	53.73	11	57.29	12
TotScore			48.45		52.11	

As noted above, females outperformed males in most cases, with the exceptions of the Asian and Hawaiian groups. However, given the small numbers of observations, one would be challenged to make any defensible argument. One difference I noted is the size of the difference in the means of males and females across race. The Hispanic females scored considerably higher than the males. In most other cases the differences were relatively small. The multi-racial females scored the highest with the Hispanic males scoring the lowest (minimum n of 5).

			Gender			
			Male		Female	
			Mean	Count	Mean	Count
Marital	Single	TotScore	48.82	111	51.93	131
	Divorced	TotScore	35.88	5	47.44	17
	Married	TotScore	49.21	40	53.98	53
	Widowed	TotScore	34.50	1	.	0

Above, the data demonstrates females scored better across all marital categories; however, the divorced females scored far higher than the divorced males. Married females scored the highest with the divorced males scoring the lowest. Why? How do we explain this and what can we do?

			Gender			
			Male		Female	
			Mean	Count	Mean	Count
DayNight	Day	TotScore	50.57	86	53.72	130
	Night	TotScore	46.05	71	49.04	71

Here, you will note that the females scored higher than the males, both during the evening and day; however, the day females scoring the highest and the evening males scoring the lowest. Again, how and why?

		Gender			
		Male		Female	
		Mean	Count	Mean	Count

Diploma						
	GED	TotScore	37.83	11	49.82	17
	HS Diploma	TotScore	49.00	138	51.31	177
	Neither	TotScore	53.75	7	76.93	7

This data indicates that the females scored higher than the males across all diploma factors. The female students receiving a GED scored far higher than the males while those with a HS diploma were only slightly higher, and again, those in the neither category (we determined these were our concurrent students), again, scored far higher than the males. The highest were the neither/concurrent females with the GED males scoring the lowest.

All these data seem to indicate differences in writing ability, interest, and/or motivation between males and females. It appears we need to stress the importance of writing to the males, motivate them better, and/or make the content more relevant to the males. Now, how do we do this?

			Gender			
			Male		Female	
			Mean	Count	Mean	Count
EnglishC	Yes	TotScore	49.60	124	51.97	174
	No	TotScore	45.27	32	53.00	27

Lastly, I looked at the scores between genders and the completion of Composition I. Again, females scored higher than males in both cases, but the highest score was the females who had not completed Composition I yet, and the lowest scores were the males who had not completed Composition I. One could surmise that these student may be currently enrolled in the class, might be concurrent students, etc. One would expect the students who had completed Comp I to do better, which was true for the males, but not the females.

I began an analysis of student ages and traits across several other variables. I listed some of these below for your review. Again, please continue the discussion as it pertains to improving the writing skills of our students, but, as shown above, it appears the male student may be in need of special attention/encouragement.

OTHER DATA

Looking at the age of our students across time of day class is taught and gender (the female night students are the oldest and the day males are the youngest):

			Gender			
			Male		Female	
			Mean	Count	Mean	Count
DayNight	Day	Age	24.41	86	25.32	130
	Night	Age	27.73	71	28.56	71

Comparing the age of our students race and gender (the black females are the oldest and Hispanic and Native American males and females are the youngest):

			Gender			
			Male		Female	
			Mean	Count	Mean	Count
Race	Caucasian	Age	25.52	104	26.16	128
	Black	Age	24.76	25	29.08	39
	Hispanic	Age	23.50	8	23.57	7
	Asian	Age	28.75	4	28.50	2
	Native American	Age	23.67	3	23.27	11
	Hawaiian	Age	48.00	1	60.00	1
	Multi	Age	30.45	11	22.17	12

Comparing the numbers of students who attend across marital status and time of day class is taught (the largest difference appears in the married category -- married males attend at night, and married females attend during the day):

Gender * DayNight * Marital Crosstabulation

Count

Marital			DayNight		Total
			Day	Night	
Single	Gender	Male	70	41	111
		Female	93	38	131
	Total		163	79	242
Divorced	Gender	Male	2	3	5
		Female	9	8	17
	Total		11	11	22
Married	Gender	Male	13	27	40
		Female	28	25	53
	Total		41	52	93
Widowed	Gender	Male	1		1
	Total		1		1
Total	Gender	Male	86	71	157
		Female	130	71	201
	Total		216	142	358

Thank you again for all your assistance.

Regards

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Subject: FW: 2nd April Assessment Stats of the Week: Level Ⅲ Analyses (continued)

From: Caldwell, Jeff
Sent: Thursday, April 25, 2013 12:17 PM
To: All Regular Staff
Subject: Assessment Stats of the Week: Level III Analyses (continued)

Good morning data lovers:

I had several requests following last week's reporting for more information regarding the performance of the students in the various divisions and disciplines. Coincidentally, I had strongly considered releasing this information very soon. So, by popular request, the data below is a reporting of the scores of our students on the Effective Written Communication assessment compared across divisions and disciplines.

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Division	N	Percent	N	Percent	N	Percent
TotScore	BIT	31	67.4%	15	32.6%	46	100.0%
	ES	102	92.7%	8	7.3%	110	100.0%
	HS	37	100.0%	0	.0%	37	100.0%
	HU	97	98.0%	2	2.0%	99	100.0%
	SS	69	100.0%	0	.0%	69	100.0%

Descriptives

	Division			Statistic	Std. Error
TotScore	BIT	Mean		41.8855	3.13288
		95% Confidence Interval for Mean	Lower Bound	35.4873	
			Upper Bound	48.2837	
		5% Trimmed Mean		41.5376	
		Median		34.5000	
		Variance		304.263	
		Std. Deviation		17.44314	
		Minimum		10.00	
		Maximum		79.50	
		Range		69.50	

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		Interquartile Range		21.50	
		Skewness		.613	.421
		Kurtosis		-.505	.821
ES	Mean			48.7642	1.90953
	95% Confidence Interval for Mean	Lower Bound		44.9762	
		Upper Bound		52.5522	
	5% Trimmed Mean			48.4760	
	Median			47.7500	
	Variance			371.922	
	Std. Deviation			19.28527	
	Minimum			9.00	
	Maximum			91.50	
	Range			82.50	
	Interquartile Range			32.16	
	Skewness			.202	.239
	Kurtosis			-.908	.474
HS	Mean			53.0405	3.25692
	95% Confidence Interval for Mean	Lower Bound		46.4352	
		Upper Bound		59.6459	
	5% Trimmed Mean			53.6779	
	Median			50.5000	
	Variance			392.477	
	Std. Deviation			19.81104	
	Minimum			10.00	
	Maximum			83.00	
	Range			73.00	
	Interquartile Range			31.50	
	Skewness			-.365	.388
	Kurtosis			-.819	.759
HU	Mean			53.6701	2.02171
	95% Confidence Interval for Mean	Lower Bound		49.6570	
		Upper Bound		57.6832	
	5% Trimmed Mean			53.9041	
	Median			52.5000	
	Variance			396.468	
	Std. Deviation			19.91151	
	Minimum			12.00	
	Maximum			89.00	

	Range		77.00	
	Interquartile Range		37.25	
	Skewness		-.163	.245
	Kurtosis		-1.187	.485
SS	Mean		51.1957	2.56703
	95% Confidence Interval for Mean	Lower Bound	46.0732	
		Upper Bound	56.3181	
	5% Trimmed Mean		50.9481	
	Median		50.0000	
	Variance		454.685	
	Std. Deviation		21.32335	
	Minimum		11.00	
	Maximum		93.00	
	Range		82.00	
	Interquartile Range		39.00	
	Skewness		.040	.289
	Kurtosis		-1.119	.570