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Unit: CLAS

Department Keston Fulcher

Head:

Liaison: Keston Fulcher

Congruency Of Outcomes: Our department established intended learning outcomes for students that are congruent with elements of CNU's Vision 2010, and our own departmental goals. Regarding Strategic Plan our intended learning outcomes load on at least two of its goals: IA Provide an intellectually challenging and dynamic liberal learning curriculum and Support learning that cultivates critical and innovative thinking. Our criteria for success for all our learning outcomes are intended to be challenging, setting the bar high for our students and faculty. Our 2nd and 3rd learning outcomes relate to student creating and evaluating research studies. Both of these activities require critical thinking skills. The goals for our department are (1) Provide students with foundational knowledge in measurement theory, (2) Train students to apply their knowledge of measurement by creating and evaluating research, and (3) Prepare students for job measurement or graduate school. Our first learning outcome is directly related to our 1st departmental goal; we're assessing foundational knowledge in measurement. Our 2nd and 3rd learning outcomes directly relate to the 2nd departmental goal – student ability to create and evaluate research. Finally, all of our intended learning outcomes are related to a student's future prospects. The foundation we emphasize and the ability to create and evaluate research are major components of any job or graduate school curriculum in measurement. In essence, assessment results of our intended learning outcomes help indicate this department's success relative to CNU's Strategic Plan and our own departmental goals.

Outcome I

Description: Students will identify and distinguish among basic measurement concepts and practices including reliability, validity, performance assessment, sampling, and fairness in testing.

First Instrument:	ETS' Concepts in Measurement Test - The test was chosen by the department because (1) it covers all of the topics stated in this learning outcome, (2) the publisher provides considerable valid evidence for its use with college students, and (3) it has national norms.
Criteria For Success:	We would like our students' average post score overall and each component therein to be 30 percentage points higher than the pre score (e.g., from the 30th percentile to the 60th percentile), which would be a slight improvement over past gains for most areas.
Data Collection Methods:	We use a pre-post design to assess how much majors have gained this outcome from their early junior to senior years. As juniors, students take the test at the beginning of METH 321, Intro to Research Methods. As seniors, they take the test at the end of METH442, Senior Seminar in Research and Statistics. The test requirement for both courses and participation is typically around 100%. The test is administered per ETS' instructions.
Results:	See Table 1a (Kes' 07-08 tables and graphs, Attachment)
Second Instrument:	departmental graduate exit survey - This survey was co-designed by department faculty and the Director of Assessment & Evaluation. Each survey item corresponds to each of the topics stated in the intended learning outcome: reliability, performance assessment, validity, sampling, and fairness in testing. Students are asked to rank and order which of these areas they learned the most in the major.
Criteria For Success:	Because the department values learning in all of these topics, we would prefer that no topic is ranked consistently lower than others, which we define as .5 or more difference in average ranking.
Data Collection Methods:	All seniors are required to take the exit survey. It is administered at the end of METH 442, the senior seminar, and takes approximately 10 minutes for students to complete.
Results:	See Table 1b (Kes' 07-08 tables and graphs, Attachment)
Interpretation:	The findings were mixed. We met our criteria for success overall (improvement of 30 %ile points); however, students did not improve to that degree across all areas. As in years past, reliability was a strength with students improving 40 %ile points. Students just met our expectations in the area of validity. On the other hand, students improved merely 11 %ile points in performance assessment. Students' gains in sampling and fairness in testing were also below expectations but to a much lesser degree. The pattern of strengths and weaknesses has not shifted dramatically over the past years. Clearly, students have consistently made smaller gains in performance assessment than in any other area. Regarding the second means of assessment, students' average rankings varied 1

than the department would like. Most salient, students ranked performance assessment much lower than the other areas (about full point). This finding lends convergent evidence that students not learning as much about performance assessment.

Use:

The last three year's results suggest that the department should on enriching the curriculum related to performance assessment. have attempted to do just this. At the beginning of the 2005 fall semester, the department analyzed the curriculum in relation to performance assessment. We found that less teaching time and fewer assignments were devoted to the topic. In response we ha implemented four strategies to improve this area. 1. Awareness Students are told at the beginning of METH 321 that there will increased emphasis on performance assessment. 2. An extra thr class meetings in METH 321 are devoted to teaching performar assessment. To make room, sessions on non-parametric statistic were reduced from six to three. Although a difficult decision, fa felt justified increasing class time on performance assessment a expense of non-parametric statistics. 3. More items about performance assessment are added to the mid-term exam, in ess weighting the topic more heavily.4. Faculty in the department a encouraged to reinforce the topic of performance assessment in classes. Because these changes affected mostly juniors this year these interventions likely did not have any bearing on this year' senior results. Next year, however, the seniors will have receive interventions and the department anticipates that their scores on performance assessment will improve substantially.

Outcome II

Description: Seniors will be able to conduct research appropriately including review of the literature, methodology, results, and interpretation.

First Instrument: A rubric for evaluating mini-studies was developed. Literature, methodology, results, and interpretation are all represented as different traits and rated using a five-point scale ranging from (1) Beginning, (2) Developing, (3) Meets Minimum Expectations, (4) Exceeds Expectations, and (5) Superior. Each of these scale poi "anchored" by behavioral descriptors to assist raters in determin a score. In addition, raters go through an hour-long training ses to improve inter-rater reliability. Past studies using adjacent-rat reliability revealed 85% agreement across all elements, demonstrating a relatively high degree of consistency between raters.

Criteria For Success: As the criteria for success, the department would like students t average 3.5 or higher across all elements and for each element, score which translates into somewhat exceeding our minimum expectations.

Data Collection In Meth 442, our required capstone class, all graduating seniors

Methods: submit a 10-15 page mini-study that contains a literature review methods section, results, and interpretation and discussion. Bec this assignment counts for 20% of the final course grade, studer typically take the project seriously. Teams of two faculty memt will evaluate each mini-study using a locally designed rubric.

Results: See Table 2a (Kes' 07-08 tables and graphs, Attachment)

Second Instrument: An item on the exit survey asks students to report if any of their work had been accepted at a peer-reviewed regional or national conference or journal. In our department, students are encourag submit and, if accepted, present or publish their research. Almo of these venues require research in the lit review/methodology/results/interpretation format. Students self report on the Graduate Exit survey if they had any research wor accepted, and the number of presentations they had given.

Criteria For Success: In the past several years, participation has held steady at about : Given that this rate is higher than the national average for simil programs, we are satisfied with a rate of 50% as our criteria for success.

Data Collection Methods: All seniors are required to take the exit survey. It's administerec METH 442, the senior seminar, and takes approximately 10 mi for students to complete.

Results: See Table 2b (Kes' 07-08 tables and graphs, Attachment)

Interpretation: On all accounts, students met or surpassed our criteria for succe Students' mini-studies were rated above 3.5 in ever area and participation in scholarly work was again higher than 50%. One that the department is particularly proud is the 3.6 average ratin the literature review section. Over the last few years, this area h been a relative weakness – students consistently being rated bel 3.5.

Use: In response, the department handed out examples of good stude literature reviews and a sheet of “pitfalls to avoid” to students b they prepared their mini-studies. We believe these interventions have helped students write better literature reviews. We are sati with the results and will stay the course for now.

Outcome III

Description: Seniors will be able to evaluate social science articles, specifically identifying are: strengths and weaknesses in each of these major sections: the lit review, methodol results, and discussion.

First Instrument: A rubric is used to evaluate each seniors' critique of an article. ' rubric was originally created by the University of Oklahoma's Measurement department. It was selected as an evaluation

	instrument because (1) it covers all of the topics stated in this learning outcome, (2) created by group of experts, and (3) provided behavioral anchors that aid with rating. Each item is rated on a point scale, from poor to excellent.
Criteria For Success:	Considering the rubric, the department decided that an average of “3” or “good” across all traits and for each trait would indicate success.
Data Collection Methods:	Students submit a critique of an article of their choosing. The assignment is submitted by all graduating seniors as part of their capstone class, Meth 442. Because this assignment is 20% of the grade, students typically put forth good effort.
Results:	See Table 3a (Kes' 07-08 tables and graphs, Attachment)
Second Instrument:	For an item on the exit survey, all seniors indicate how the department can make them more competent in evaluating the methodology sections of articles. In the past, the faculty's review of students' critiques has revealed relative weakness in evaluating methodology section. This question is meant to probe students on this problem in the hopes that their suggestions may inform future curriculum planning.
Criteria For Success:	Criteria for success are not applicable to this assessment.
Data Collection Methods:	All seniors are required to take the exit survey. It is administered in METH 442, the senior seminar, and takes approximately 10 minutes for students to complete.
Results:	As is often the case with open-ended questions, answers varied considerably. Nevertheless, two main themes emerged from students' comments, which I will summarize here. 1. That section was the most complicated. 2. Many aspects of the Methods sections of the articles were more advanced than anything students had read in class.
Interpretation:	The results of this assessment are mixed. The overall average rating of 2.9 for the critiques is slightly below our criterion for success: “3” or “good.” The culprit for this sub-three rating is the relatively low score of 2.6 on the methodology section. All other areas met expectations. This weakness in methodology is worrisome because this area is emphasized heavily in the major.
Use:	Faculty considered these results in a department meeting and decided that perhaps the problem was in the assessment. Because students were free to choose which article they picked, many students selected articles with methodologies far more advanced than what they've encountered in coursework. Consequently, the

did not critique that section of the article well and were rated low. From an assessment perspective, the faculty member's rating of students' critiques was not only influenced by students' proficiency but also by the difficulty of the article. In other words, letting students pick their own articles introduced a major confound to assessment. To correct this flaw, faculty decided to select one article that all students will critique thus eliminating the confound. We hope that this change will make our assessment of the critiques meaningful and useful in the future.

Outcome IV (Optional)

Description:

First Instrument:
 Criteria For
 Success:
 Data Collection
 Methods:
 Results:

Second
 Instrument:
 Criteria For
 Success:
 Data Collection
 Methods:
 Results:

Interpretation:
 Use:

Outcome V (Optional)

Description:

First Instrument:
 Criteria For
 Success:
 Data Collection
 Methods:
 Results:

Second
 Instrument:

Tables Associated with 2007-2008 Assessment Record (Example)

Table 1a

Gains on ETS' Concepts in Measurement Test

	Overall	Reliability	Performance assessment	Validity	Sampling	Fairness in testing
Juniors (Fall 2004, n =62)	27%ile	35%ile	20%ile	29%ile	30%ile	22%ile
Seniors (Spring 2006, n = 62)	57%ile	75%ile	31%ile	60%ile	55%ile	44%ile
Current (2006) Difference in %iles	+ 30	+ 40	+ 11	+ 31	+ 25	+ 22
Last Year (2005) Difference in %iles	+ 24	+ 30	+ 13	+ 35	+19	+ 24
Two Yrs Ago (2004) Difference in %iiles	+ 26	+ 37	+ 9	+ 28	+28	+ 30

Table 1b

Rank Order of Measurement Concepts

Area	Avg. Rank
Reliability	2.6
Sampling	2.8
Fairness in testing	2.9
Validity	2.9
Performance assessment	3.8*

Table 2a

Average Faculty Ratings of Students' Mini-Studies

	Overall	Literature Review	Methodology	Results	Discussion
Seniors 2006 (n = 70)	3.8	3.6	4.0	3.9	3.8
Seniors 2005 (n = 64)	3.6	3.1	3.9	4.0	3.8
Seniors 2004 (n = 73)	3.6	3.2	3.8	3.8	3.7

Table 2b

Participation of Students in Scholarly Activities

	Percentage of students
Seniors 2006 (n = 70)	58%
Seniors 2005 (n = 64)	62%
Seniors 2004 (n = 73)	52%

Table 3a

Average Faculty Ratings of Students' Critiques

	Overall	Literature Review	Methodology	Results	Discussion
Seniors 2006 (n = 70)	2.9	3.0	2.6	3.1	3.0
Seniors 2005 (n = 64)	3.0	2.9	2.6	3.3	3.0