UNM STATISTICAL LITERACY COURSE:

Sample Assessment Items

The course assessment is based on forum essays, chapter exercises, an instructor project and exams.

1. **Forum essays** (12%: 12 challenges): As a literacy course, this course involve writing. Instructors issue challenges; students write short responses. This course uses an online forum (Odyssey)[1] that doesn't allow a student to see anyone else's answer until after they have submitted their own (no free riders), that never shows a student's name or ID (anonymous) and that requires students to grade each other (immediate feedback from multiple sources). Here is an example:

> **Challenge #1: How much Math do we really need?**
> In a Washington Post essay, G. B. Ramanthan (a math teacher) argued that we don't need much math.
> Challenge: Pick just one side as your conclusion. (1) State "AGREE" or "DISAGREE" as the first word in your post. AGREE says "Math is NOT needed"; DISAGREE says "Math is needed."
> (2) Define exactly what YOU mean by "Math". What courses or levels of school math?
> (3) Give several reasons supporting your conclusion. Number the parts of your answer.
> A copy of this article is available at www.StatLit.org/CP/20101023-Math.pdf

   Students review each other's responses on four criteria (Responsiveness, Explanation, Extension and Writing) and give the reasons for their choices. The Odyssey program computes a score for each review and then computes a cumulative power for each student based on all the review scores they received. Students are graded based on the ratio of their power to the median power in their class.

2. **Chapter Exercises** 28%). These exercises are all online: mainly multiple choice. The multiple choice questions usually allow two tries; the writing is limited to a one-line description or comparison.

   A) Multiple choice:

   Q1. Cases attributable: Suppose that the malaria death rate is 2% among whites (1% among blacks) with 20,000 deaths among whites. How many of the malaria deaths among whites are attributable to being white? **ANSWER: 10,000.**

   Q2. Given the number of deaths attributable to being white, this means that those deaths were caused by being white. T or F? **ANSWER: False.**

   Q2. Reading statistics presented in tables of percentages or rates:

Insert 100% Column-based toy table.

Students	----------SEX ----------		
MAJOR	MALE	FEMALE	ALL
Business	60%	20%	40%
Economics	10%	50%	30%
MIS	30%	30%	30%
ALL	100%	100%	100%

Which of the following accurately describes the 60% in the upper left hand corner?
a. Sixty percent of these Social Science majors are Freshmen.
b. Sixty percent of these freshmen are Social science majors
c. 34% of these students are freshmen social science majors
ANSWER: A.

   B) One-liner: Compare the 60% and the 20% in the top row as a ratio using likely grammar:
   >> ***Among these students, guys are three times as likely to be Business Majors as [are] gals.***

3. **Project** (10%): This is up to the instructor. These points may be allocated among the other items.

4. **Exams** (50%). The two tests and the final are very similar to the chapter exercises shown above.

[1] Schield (2014). Odyssey: A Journey to Life-Long Statistical Literacy. www.statlit.org/pdf/2014-Schield-ICOTS.pdf