

## COGNITIVE TYPE TEST/ITEM WRITING RULES

Note: The order below does not exactly correspond to the order in the book .. Not to worry!

### GENERAL RULES

I first like to put items into 2 large pots: **recognition** and **supply**. A recognition item is one where the answer options are given ...then you select one; or the supply type where you have to give the answer ... write something out, etc. Some authors prefer to call these fixed choice or complex type ... you pay your money and take your choice! So, given that ... here are some things that seem to apply across the board, no matter what the specific type of test is.

- 1.Item should test some important learning objective: bottom line, don't waste space testing trivial stuff
- 2.Problem should be clearly formulated
- 3.The simpler the language, the better: don't try to be a word wizard!
- 4.Avoid extraneous information ... ie, get to the point!
- 5.Avoid textbook quotes: certainly, we can do better than this!
- 6.Avoid opinion items: when you are testing for knowledge that is
- 7.Use good grammar: Ain't a bad idea!
- 8.Items should be independent of other items: if one item gives clues to another item or **DEPENDS** on information from another item ... then score on test is confusing
- 9.Use appropriate type of item format for what you are testing
- 10.MOST IMPORTANT ... **Let someone else review items prior to use** ... I can't stress this too much!

### MULTIPLE CHOICE (interpretive exercise falls in here too)

We need to remember that a MC item has a stem ... where you set up the problem ... and then options, including both the correct choice and the distractors. In fact, all the recognition items are multiple choice ... the distinction then becomes one of HOW many choices are provided for you to select from.

- 11.Put as much of the item in the stem as possible: Reason? Cuts down on item reading time
- 12.Put item in positive terms ... avoid negative phrases
- 13.But, if you need to put in a negative, use **EMPHASIS** like underline or bold
- 14.Answers need to be **CORRECT** ... or **CLEARLY THE BEST**
- 15.Distractors should be plausible ... not just fillers that no one pays any attention to
- 16.Lengths of options should **NOT** give a clue to right choice ...
- 17.**POSITION** of correct choice should **NOT** give a clue to right answer ... you can double check this after finishing the test ... and make adjustments if necessary
- 18.Use "all of the above" and "none of the above" carefully.

Note: My buddy, now retired, Bob Frary at VPI ... and his friend Miguel Garcia-Perez .. have done some excellent work related to the none of the above (NOTA) option. There position is that the presence of NOTA in items tends to make them somewhat more difficult and, because of that, potentially more discriminating. One paper is: Frary (1991). The NOTA option: an empirical study, *Applied Measurement in Education*, 4(2), 115-124.

19. Avoid complex item types like using 3 options ... then making more options like: A and B, B and C only ... etc. Too confusing and does not really accomplish much

### **BINARY TYPE (alias True False)**

20. Only include ONE item per item

21. Keep items short

22. Write so item is unequivocally true or false ... NO partly true and partly false items!

23. Avoid negative wordings at ALL costs!

24. Avoid specific determiners like ALL, or ALWAYS, or NEVER ... in TF items

### **MATCHING**

Matching items are perhaps underutilized ... Keep in mind that a matching item has 2 parts: the stimulus set part and the response set part.

25. Use homogeneous material in both sets ... ie, don't try to make 5 different kinds of items in one

26. Make relatively short items ... but MORE ITEMS (ie, don't have 1 page with 25 in the stimulus and 30 in the response set ... totally unmanageable!)

27. Have more or less in both sets .... DON'T HAVE EQUAL AND THEN SAY ... EACH STIMULUS GOES WITH 1 AND ONLY 1 RESPONSE! Why? Well, say you have 5 on each side ... and you know only 4 ... you get the 5th free as a bonus ... or say you miss 1, you necessarily miss 2 ... so score is not very clear in this case. Better to say have 4 on stimulus side ... and 6 on matching side .. and say that any response may be used 0 times or more than once. KEEPS THE student THINKING .. !

28. Use some logical ordering (alphabetical for example) for both sets

29. Be clear on the BASIS that the match is to be made ...

### **SHORT ANSWER OR COMPLETION**

30. Silly to say but, ONLY short answers to be required! (Kind of obvious right?)

31. Make sure that only 1 answer is acceptable

32. For completion, only key words or phrases should be where the blanks are ... would be rather silly to make a blank for an AN or a THE .... wouldn't it? (Of course, there are exceptions ... I can see a fill in the blank in an English class where an AN or THE would be THE key word)

33. Make blanks the same lengths ... and put near end. Reasons? We don't want length of blank to give a clue ... and putting near end makes student able to do items faster.

### **EXTENDED RESPONSE OR ESSAY**

These items are the ones where you force the examinee to write a paragraph or 2 ... or more, in response to some general (or itemized list of subparts) question.

34. Restrict these to higher level objectives ... ie, don't use essay to test facts!

35. Make sure the task is clearly defined. I prefer to have a stem part ... which sets the tone .. then 2 or 3 specific items .... so the examinee knows exactly what he/she has to respond to

36. Provide adequate time for responding ... and perhaps suggest times for each item and/or give point values so examinee can use his/her time to their best advantage
37. DO NOT GIVE A CHOICE AMONGST THE ITEMS ... like answer any 4 of the 7. This is really very bad measurement practice and ... is usually in response to the previous caution ... that the test is too long for the time given. It is bad practice for several reasons: as many combinations of 4 out of 7 that there are, that is how many different tests you will have, and some combinations are definitely harder than others. Also, there will for sure be some examinees who can ONLY ANSWER 4 .... and breathe a sigh of relief .... while others can do all 7 and you do NOT allow them to show the extent of their knowledge. Under such methods, test scores are higher on average and show LESS variance (not good for reliability) across examinees.
38. Really, essays are good for seeing if the examinee can WRITE and ORGANIZE thoughts ... and should be restricted to those kinds of objectives

### **Scoring and other problems with Extended Response Items**

39. Use point allocation method if possible ... creating model good and bad answers is a good idea
40. Score ONE item for ALL examinees ... then go to the second, third, etc. This helps for better consistency in scoring
41. Keep examinee unknown to you if possible ... not easy to do but means bias is less likely to creep in
42. Have more than one scorer if possible ... again not easy but a good idea
43. Essays are EASY to construct but HARD to score
44. The comparable thing to guessing on selection items is BLUFFING
45. Essays restrict content sampling ... only so much you can cover on 1 test
46. Scores on essays are influenced by factors (neatness of writing, etc.) OTHER than content of response
47. Essays can actually promote POOR WRITING SKILLS since the time limits are usually not adequate for making a thoughtful response ... thus, hurry up and write it fast sets in

### **OTHER ASSESSMENT STRATEGIES**

Here is a potpourri of other methods for making assessments ... and some pluses and minuses.

48. Open book exams: many times, examiner makes this part more difficult
49. Oral exams: problem of test time ... to cover all examinees, and consistency of questions asked
50. Take home tests: who does the work?
51. Retests: great idea for attempting to assess "learning"
52. Collaborative testing: like group projects where one score goes to all doing the project
53. Journals: nice to have students keep chronology of what they are doing
54. Portfolios: nice to have students keep records of their products ... too bad we don't practice that more with college students ... would help them when looking for a job!
55. Performance tests: if you want to see if they can change a tire, watch them change a tire ... really this is best general method for seeing if examinee knows his/her stuff but ... complicated to pull off in classroom settings