

EDPS 340 Binary Questions

Kyung-Hee Kim, Ph.D.
Eastern Michigan University

Alternate Response Items (= Binary Choice /Alternative Response)

- Involves the selection of one of two alternatives
 - true / false
 - yes / no
 - right / wrong
 - fact / opinion
 - agree/disagree
- Types of knowledge tested:
 - Test simple knowledge
 - cause & effect
 - Simple logic
- Mainly for Knowledge & Comprehension
 - Can be written at higher levels

Guidelines for Writing Binary Choice Items 1

- Word statements clearly
- Avoid overgeneralizing. Avoid broad general statements if they are to be judged true or false.
 - **Poor:** *Heavy smoking causes lung cancer.* T F
 - **Better:** *Heavy smoking often causes lung cancer.* T F
- Avoid Trick questions.
 - *I.e., General Wolseley led Canadian troops to Manitoba in 1870.*
 - *3 tricks: Colonel, British, Not yet a province*
- Avoid trivial statements. Do not use trivial statements to "pad out" the number of questions & marks to arrive at a predetermined level.

Guidelines for Writing Binary Choice Items 1

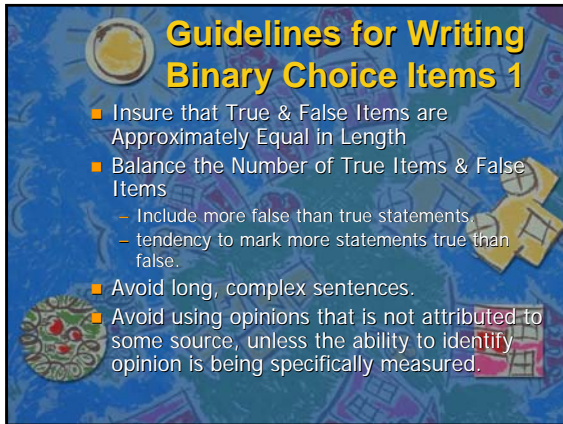
- Statements should be entirely true, or entirely false (should have one idea, not several ideas, especially for K-12 students):
 - **Poor:** *Dr. Kim teaches EDPS 340 at 2:00 on Tues & Thurs to wonderful students*
- T T F T = F; for kids 3Ts out of 4=T

Guidelines for Writing Binary Choice Items 1

- Avoid using universal descriptors such as "**never**", "**none**", "**always**", & "**all**".
 - *Testwise students will recognize that there are few absolutes.*
- Avoid **negative** words, as they are often overlooked by students.
 - **Poor:** *It was not unheard of for Henry VIII to close monasteries in England.* T F
 - **Better:** *Henry VIII closed some monasteries in England.* (T)

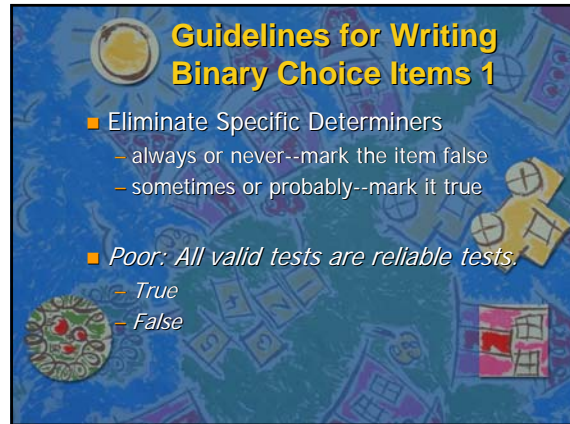
Guidelines for Writing Binary Choice Items 1

- Avoid including two ideas in one statement, unless cause-effect relationships are being measured.
 - **Poor:** *Porpoises are able to communicate because they are mammals.* T F
 - **Better:** *Porpoises are mammals.* T F
Porpoises are able to communicate. T F
- *Test validity is a function of test reliability, which can be improved by using fewer items.*
 - True
 - False
- Provide a "T" & "F" beside each statement & ask students to circle correct answer.
 - *Avoids problem of students writing illegible letters.*



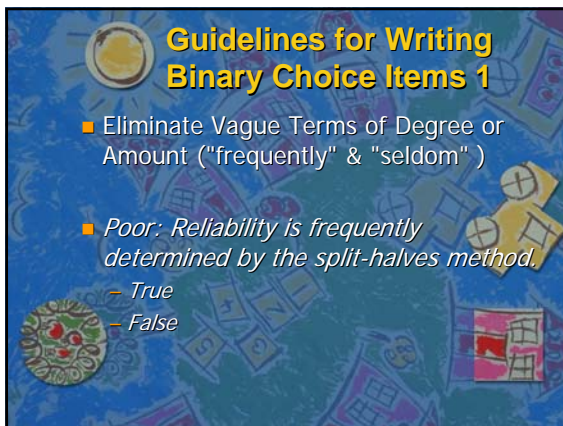
Guidelines for Writing Binary Choice Items 1

- Insure that True & False Items are Approximately Equal in Length
- Balance the Number of True Items & False Items
 - Include more false than true statements.
 - tendency to mark more statements true than false.
- Avoid long, complex sentences.
- Avoid using opinions that is not attributed to some source, unless the ability to identify opinion is being specifically measured.



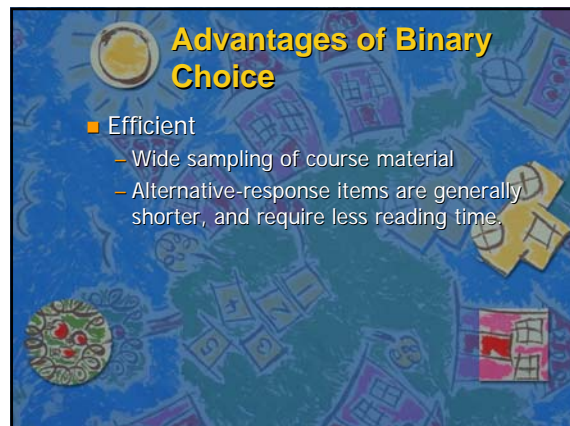
Guidelines for Writing Binary Choice Items 1

- Eliminate Specific Determiners
 - always or never--mark the item false
 - sometimes or probably--mark it true
- *Poor: All valid tests are reliable tests.*
 - True
 - False



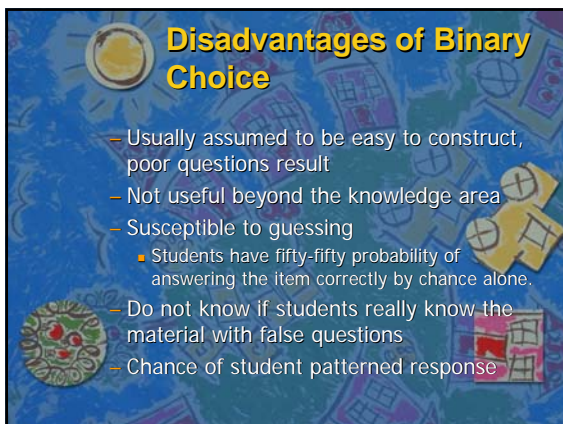
Guidelines for Writing Binary Choice Items 1

- Eliminate Vague Terms of Degree or Amount ("frequently" & "seldom")
- *Poor: Reliability is frequently determined by the split-halves method.*
 - True
 - False



Advantages of Binary Choice

- Efficient
 - Wide sampling of course material
 - Alternative-response items are generally shorter, and require less reading time.



Disadvantages of Binary Choice

- Usually assumed to be easy to construct, poor questions result
- Not useful beyond the knowledge area
- Susceptible to guessing
 - Students have fifty-fifty probability of answering the item correctly by chance alone.
- Do not know if students really know the material with false questions
- Chance of student patterned response