

# Study Habits

Strategy for Success

# Note-taking

- Great study habits start with great notes
- This requires time outside of class
  - Your notes are a “living document”
  - They are your **personal record for learning**
- Notes must be organized
- They must be able to grow and change

# What good notes “look like” ...

- Each person is unique
- *The important part is that you can **accurately** and **easily** retrieve and **come to know (learn)** information from class from your notes*
- A consistent theme is the notion of “chunks”
  - Lectures are broken into sections; it is your job to recognize and learn those **chunks**

# Some notes from the worst class I ever took...

Factor model = summary of original variables  
Factor scores = estimates of factors used in subsequent analyses.

## Chunk 1

Exploratory FA - searching for structure among a set of variables (data reduction).  
- often used (most frequent purpose of FA)

Confirmatory FA - testing hypotheses as to which variables group together based on theoretical assumptions or prior research.  
- the assessment of the degree to which the data meet the expected structure of the analyst.

Component Analysis - this model is used when the objective is to summarize most of the original information (variance) in a minimum number of factors for prediction purposes.

Common FA - this model is used primarily to identify underlying factors or dimensions not easily recognized.

## Factor Extraction

## Chunk 2

Orthogonal = solution in which the factors are extracted in such a way that the factor axes are maintained at 90 degrees, meaning that each factor is independent of all other factors.  
- correlation between factors = 0

Oblique = more complex than the orthogonal solution - subject to covariance.  
- the factor solution is computed so that the extracted factors are correlated.

288 "Oblique solutions assume that the original variables are correlated to some extent; therefore the underlying factors must be similarly correlated."

- ① correlation matrix  $\rightarrow$   $\Omega$  or  $R$
- ② FACTOR MODEL  $\rightarrow$  component or common
- ③ EXTRACTION  $\rightarrow$  ORTHOGONAL or OBLIQUE.

EXTRACTION OF JUST A "UNROTATED" FACTOR ALLOWS THE ANALYST TO EXPLORE THE DATA REDUCTION POSSIBILITIES FOR A SET OF VARIABLES AND OBTAIN A PRELIMINARY ESTIMATE OF THE NUMBER OF FACTORS TO EXTRACT.

EACH FACTOR HAS A DIFFERENT FACTOR LOADING - WHICH IF YOU ARE LOOKING TO USE THE DATA FOR ANOTHER ANALYSIS SHOULD BE EXAMINED, THE FACTOR w/ THE HIGHEST LOADING IS CHOSEN AS A SURROGATE REPRESENTATIVE OF THE DATA.

- Correlation Matrix derivation -

R - Factor Analysis - a result that reflects underlying pattern of variables

Q - Factor Analysis - a result that reflects underlying pattern of the case  
i.e., recognizes similar individuals.

## - Types of Variance -

Common = variance in variable shared w/ all other variables in the analysis

Specific = variance associated only w/ a specific variable.

Error = variance due to unreliability in the data gathering process.

PCA  $\rightarrow$  total variance considered

$\rightarrow$  unit variances are inserted in the diagonal of the correlation matrix

CFA  $\rightarrow$  factors derived only w/ common variance

$\rightarrow$  communalities inserted in the diagonal of the correlation matrix

Unit variances = all variance brought into factor matrix

Communalities = result of factor solution dealing only w/ common variance.

# The half-page technique

- Takes notes on only the top half of a page in class
- Leave the bottom half for “additional **thoughts**” later in the day (on your own)
  - This promotes **thinking** about the material on your own, later
  - Thinking is essential for learning

# The page-insert technique

- Similar to the half-page technique
- Instead insert one blank page after class and use it for discussion of the previous, in-class note page
- Again promotes “additional thoughts” on the course material outside of class

# The back-of-page technique

- Leave the back of each page blank
- Use it to address additional thoughts later

# My preference

- The half page is the best one, because you keep information organized on the same page
- You can always add a blank page if you need more space
- Always, use a different color for notes you write outside of class
- Also, it is a good practice to use a highlighter on your class notes after class
- Derive any flash cards from your recopying process

# The benefits of recopying your notes

- You better familiarize yourself with the material
- You are prepared for the next class
  - You are able to ingest what comes next
- If you are confused, you know it sooner than later
- You start to develop interest in the material involuntarily
  - Dr. McGregor example
- If you missed something (a gap in your notes), you know it
  - You can ask another student to help you fill in the gap
- Review becomes review

# The #1 Benefit

- The course material becomes yours
- You actually earn your grade
  
- Otherwise, you see yourself as powerless and your grade is something you “get” from me