


Research Methods

Psy 365


Introduction



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What We Will Cover in This Section

- Course requirements.
- Approaches to knowledge.
- Assumptions in the scientific method.
- Hypothesis testing, a review.



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Course Requirements

- Text.
- Patten book.
- Syllabus
- Study Guide
- Attendance
- Contacting me

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Integrity

- I expect that all of the work that you do was done by you alone.
- Plagiarism or cheating will result in a failing grade for the course.

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Course Web Site

- Syllabus.
- How to contact me.
- PowerPoint slides.
- Interesting sites.
- Pictures of me.



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Evaluation

- Quiz after each section.
 - Each quiz worth about 15-25 points.
 - Drop lowest quiz in computing grade.
 - Drop the first missed quiz as the lowest quiz.
 - Make up subsequent quizzes with excuse.
- No extra credit.
- No final examination.

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Paper #1

- **Group research project.**
 - Worth 60 points.
 - Choose project.
 - Due on **Tuesday, April 29.**

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Paper #2

- **Research proposal.**
 - Worth 60 points.
 - See me before starting.

Or

- **Literature review.**
 - Worth 60 points.
 - See me before starting.

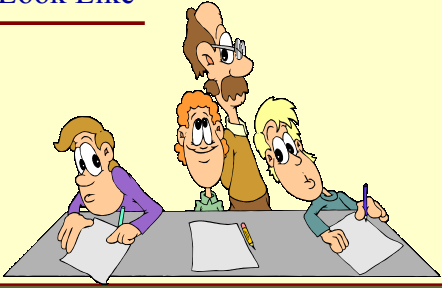
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Paper #2

- **Must represent either an original research idea or research summary.**
- **Must be prepared in APA format.**
- **Due Thursday, May 1.**

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What Quizzes May Look Like



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Sample Multiple Choice Item.

1. This course is called
 - A. Elementary physics
 - B. Fun with sushi.
 - C. Research methods in psychology.
 - D. Existential phenomenology.

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Typical TRUE FALSE items.

1. TRUE FALSE California University of Pennsylvania is not located in the commonwealth of California.
2. TRUE FALSE Your professor is Wolley Segap.

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Typical Definition

Define and give an example of the term CHEATING.

CHEATING occurs when a person copies another person's work and turns it in as his/her own. An example would be copying someone's quiz answers or turning in someone else's paper and taking credit for it.

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Examples of Bad Definitions.

CHEATING is when you cheat and do bad things. Like taking your friend's pencil.

CHEATING is illegal stuff people do in class and they get caught.

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Typical Essay Question

What are the practical, ethical, and legal issues surrounding the study of the development of drugs on the development of intelligence in children?

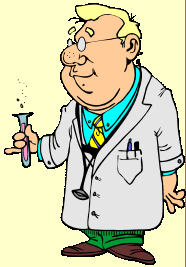
What are the two key requirements for a true experiment?

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**The Science
of
Psychology**



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Approaches to Knowledge

TENACITY
Acquiring knowledge on the basis of superstition or habit.

INTUITION
Acquiring knowledge on the basis of feelings, instinct or inspiration.

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Approaches to Knowledge

AUTHORITY
Accepting knowledge because it is acquired from a highly credible source.

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Current Approaches

RATIONALISM
Acquiring knowledge on the basis logic and reasoning.

EMPIRICISM
Acquiring knowledge on the basis of experience.

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Working Assumptions of Science

DETERMINISM
The belief that events are caused by specific natural phenomena.

RATIONALITY
There is a set of knowable rules.

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Working Assumptions of Science

REGULARITY
Events follow the same laws and rules and occur in the same way at all times and in all places.

DISCOVERABILITY
We can discover the uniformities that exist.

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Goals of Research

DESCRIPTION
The accurate portrayal of a situation or phenomenon.

EXPLANATION
The statement of the cause of some situation or phenomenon.

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Goals of Research

PREDICTION
The ability to anticipate the occurrence of some event.

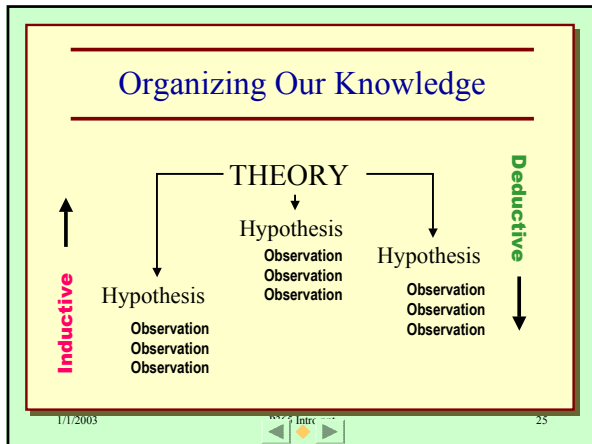
CONTROL
Manipulation of some condition(s) to produce a change in behavior.

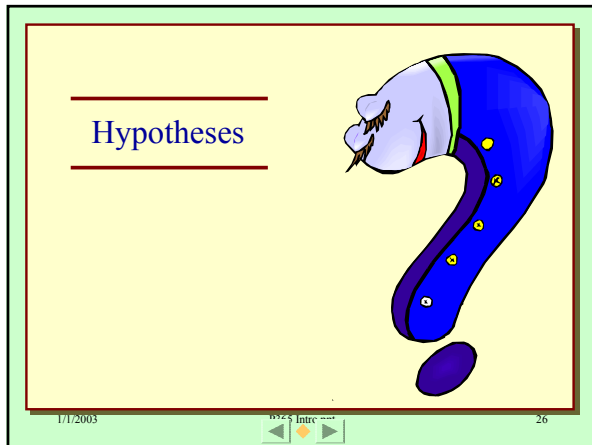
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CAUSATION?

The manipulation of one event to produce another event.

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- ### Types of Hypotheses
- **Research hypothesis.**
 - One tailed.
 - Two tailed.
 - **Statistical hypothesis.**
 - Effect size.
 - Statistical significance.
 - Practical significance.
 - **Logical hypotheses.**
 - Null hypothesis.
 - Alternative hypothesis.
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Example

- **Research hypothesis.**
 - There is a positive relationship between grades and time spent studying.
- **Logical hypotheses.**
 - H_0 : There is a zero or negative relationship between grades and time spent studying.
 - H_a : There is a positive relationship between time spent studying and grades.
- **Statistical hypothesis: $r > 0$.**

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Major Goal of the Course

*GIVE YOU THE BASIC KNOWLEDGE
NEEDED TO UNDERSTAND AND EVALUATE
ROUTINE PSYCHOLOGICAL RESEARCH
AND TO DEVELOP A BASIC RESEARCH
PROJECT.*

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The End

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