

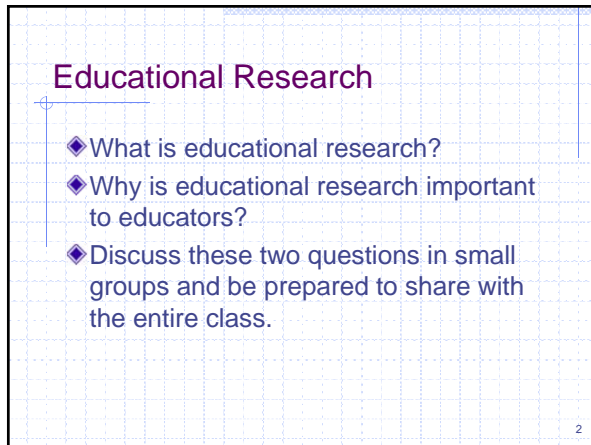


SACRAMENTO STATE
Leadership begins here.

Educational Research

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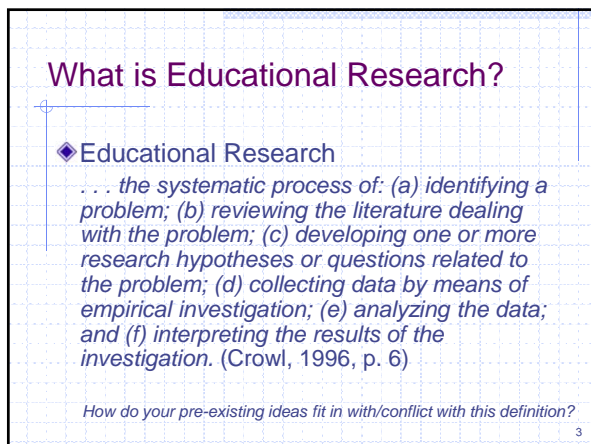
1



Educational Research

- ◆ What is educational research?
- ◆ Why is educational research important to educators?
- ◆ Discuss these two questions in small groups and be prepared to share with the entire class.

2



What is Educational Research?

- ◆ Educational Research
... the systematic process of: (a) identifying a problem; (b) reviewing the literature dealing with the problem; (c) developing one or more research hypotheses or questions related to the problem; (d) collecting data by means of empirical investigation; (e) analyzing the data; and (f) interpreting the results of the investigation. (Crowl, 1996, p. 6)

How do your pre-existing ideas fit in with/conflict with this definition?

3

Why is Educational Research Important (to school psychologists)?

Federal IDEIA 2004 Regulations

§ 300.8 Determining the existence of a specific learning disability.

The IEP Team "may determine that a child has a specific learning disability if"

(1) "The child does not achieve commensurate with the child's age" ... "when provided with learning experiences appropriate for the child's age".

(2) "The child fails to achieve a rate of learning to make sufficient progress to meet State-approved results" ... "when assessed with a **response to scientific, research-based intervention process**; or The child exhibits a pattern of strengths and weaknesses in performance, achievement, or both, or a pattern of strengths and weaknesses in performance, achievement, or both, relative to intellectual development, that is determined by the team to be relevant to the identification of a specific learning disability".

4

Why is Educational Research Important (to school psychologists)?

Federal IDEIA 2004 Regulations

§ 300.8 Determining the existence of a specific learning disability.

(3) The IEP Team "determines that its findings" ... "are not primarily the result of a (i) Visual, hearing, or motor disability; (ii) Mental retardation; (iii) Emotional disturbance; (iv) Cultural factors; or (v) Environmental or economic disadvantage."

For a child suspected of having a specific learning disability, the IEP Team "**must consider, as part of the evaluation**" ... "**data that demonstrates that prior to, or as a part of the referral process, the child was provided appropriate high-quality, research-based instruction in regular education settings,**" ... "including that the instruction was delivered by qualified personnel"

"Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction, was provided to the child's parents. If the child has not made adequate progress after an appropriate period of time," ... "a referral for an evaluation to determine if the child needs special education and related services must be made."

5

Introduction

◆ *Rarely ... dose a single research study produce the certainty needed to assume the same results will apply in all or most settings. Rather, research is an ongoing process, based on many accumulated understandings and explanations that, when taken together, lead to generalizations about educational issues... (Gay & Airasian, 2003, pp. 3-4)*

6

First Class Meeting Agenda

- ◆ Course Expectations, Objectives, and Requirements
 - Course materials can be found at <http://www.csus.edu/indiv/b/brocks/>
- ◆ Basic and Applied Research Continuum
- ◆ Quantitative and Qualitative Research Defined

7

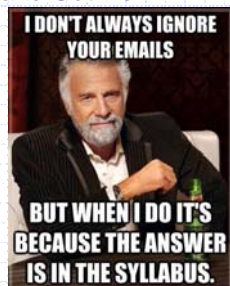
General Expectations

- ◆ Undergraduate = knowledge consumer
- ◆ Graduate (Masters) = knowledge evaluator
- ◆ Graduate (Doctorate) = knowledge producer

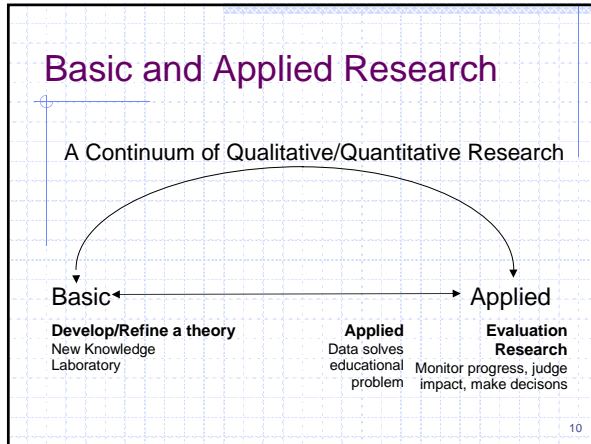
8

Specific Expectations

- ◆ Course [Syllabus](#) and Outline



9



Quantitative vs. Qualitative Research

	Quantitative	Qualitative
Approach	Deductive (develop predictions) General to specific	Inductive (develop generalizations) Specific to general
Setting	Artificial (lab)	Natural (classroom)
Purpose	Hypothesis Testing (prediction)	Hypothesis Generation (deep meanings, human perspectives)
Focus	Specific or Closed (specific variables, no or limited interaction with subjects)	General or Open (full context of a problem, interaction with participants)
Plan	Highly Structured (begins with specific questions, specific proposal)	Flexible/Evolves (begins with a general problem, proposal is vague)
Analysis	Objective, Numbers (statistical, quantifiable)	Subjective, Words (descriptive, interpretive)

11

- ### Quantitative vs. Qualitative Research
- ◆ **Quantitative Methodologies**
 - *Descriptive (Survey) Research*
 - *Correlational Research*
 - *Group Comparison Research*
 - Causal-Comparative Research
 - AKA Ex Post Facto Research
 - Quasi-Experimental Research
 - Experimental Research
 - ◆ **Qualitative Methodologies**
 - *Narrative Research*
 - *Ethnography Research*
- 12

Quantitative & Qualitative Research

- ◆ How these methods can work together.
 - Qualitative
(Inductive: Specific to General or Part to Whole)
 - ◆ Specific: What are the experiences of EDS 250 section 1 students?
 - Hypothesis generation
 - ◆ General: Educational research classes are interesting.
 - Quantitative
(Deductive: General to Specific or Whole to Part)
 - ◆ General: Educational research classes are interesting.
 - ◆ Specific: EDS 250 section 3 is a research methods class, thus students should find it to be interesting.
 - Hypothesis testing.

Descriptive (Survey) Research

- ◆ Describes (using numbers) how a variable is distributed in a population.
- ◆ Frequently studied variables include:
 - Preferences, attitudes, practices, concerns, interests.
- ◆ Makes use of the following:
 - Interviews (semi-structured and structured).
 - Questionnaires (semi-structured and structured).
 - Observations.
- ◆ Example: Crisis Intervention Training.
- ◆ Example: See [Bolnick & Brock \(2005\)](#)

Crisis Intervention Training Questionnaire

Please read the questionnaire carefully and answer all questions either "YES" or "NO" or circle or fill in the appropriate response when requested. Return the questionnaire in the attached self-addressed stamped envelope. Thank you for completing this questionnaire!

Part One: Expectation for Crisis Intervention Service

1. Crisis intervention and counseling services help individuals cope with the emotional trauma of crisis events. Does your school psychology training program anticipate that its students will be expected to provide these services to staff members and/or students following crisis events (e.g., severe injury, suicide and/or unexpected death, threatened death and/or injury, crisis, war and critical events, natural and man-made disasters)? YES / NO

Part Two: Crisis Intervention Training

2. Does your training program provide crisis intervention training to students? YES / NO

3. Does your training program review with students examples of written procedural guidelines (i.e., a crisis intervention plan) that may be used to facilitate the provision of crisis intervention services to staff members and/or students following crisis events? YES / NO

4a. If the response to either question 2 or 3 was "YES":
Please circle the response(s) that best describes the type of training offered to students (circle all that apply).

Crisis Training	Crisis Intervention	Crisis Response	Crisis Counseling	Suicide Intervention	Suicide Prevention	Other (please list on back)
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4b. If the response to either question 2 or 3 was "YES":
Please circle the minimum training period provided to students (circle only one).

one hour	several hours	part of a course	part of several courses	an entire course	several courses	Other (please list on back)
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4c. If the response to question 2 or 3 was "YES":
Please list the names of the courses within which crisis intervention training is provided.

Part Three: Crisis Intervention Training Directory

5a. If the response to question 2 or 3 was "YES":
Would your training program be able to be listed in a published directory of training programs that provide crisis intervention training? YES / NO

5b. If the response to question 5a was "YES":
Please list the name, title, address, and phone number of the training program contact person.
Name: _____
Title: _____
Address: _____
Phone Number: _____

Part Four: Comments

7. Please write any comments you have on the back of this questionnaire.

Correlational Research

- ◆ Describes the extent to which one set of variables are related to another set of variables within a single group.
- ◆ Frequently studied variables in education include:
 - Academic achievement and student characteristics.
- ◆ Typically identify casual (not causal) relationships.
- ◆ Example: Reading comprehension and ADHD symptom severity.

16

DSM IV Attention-deficit/Hyperactivity Disorder Symptom Checklist

	Not at all	Just a little	Quite a bit	Very much
1. Fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities.	0	1	2	3
2. Has difficulty sustaining attention to tasks or play activities.	0	1	2	3
3. Does not seem to listen when spoken to directly.	0	1	2	3
4. Does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions).	0	1	2	3
5. Has difficulty organizing tasks and activities.	0	1	2	3
6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework).	0	1	2	3
7. Loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools).	0	1	2	3
8. Easily distracted by extraneous stimuli.	0	1	2	3
9. Forgetful in daily activities.	0	1	2	3
10. Fidgets with hands or feet or squirms in seat.	0	1	2	3
11. Leaves seat in classroom or in other situations in which remaining seated is expected.	0	1	2	3
12. Runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness).	0	1	2	3
13. Has difficulty playing or engaging in leisure activities quietly.	0	1	2	3
14. "On the go" or often acts as if "driven by a motor."	0	1	2	3
15. Talks excessively.	0	1	2	3
16. Blurts out answers before questions have been completed.	0	1	2	3
17. Has difficulty awaiting turn.	0	1	2	3
18. Interrupts or intrudes on others (e.g., Butts into conversations or games).	0	1	2	3

17

Group Comparison Research

- ◆ Definition
 - How a quantifiable variable may be distributed differently among two or more groups.
- ◆ Attempts to establish cause and effect relationships.
 - Independent variable (the cause)
 - ◆ The pre-existing factor or treatment hypothesized to have a certain effect. For example,
 - Dependent variable (the effect)
 - ◆ The tool or measure used to assess the effect of the independent variable. For example, ...

18

Types of Group Comparisons

- ◆ Causal-Comparative Research
 - Ex Post Facto: "applying to events that have already occurred..."
 - Independent (causal) variable **is not** manipulated.
- ◆ Experimental Research
 - Independent (causal) variable **is** directly manipulated.
 - True Experiments
 - Random assignment of *individuals* to treatment conditions.
 - Quasi-Experiments
 - Random assignment of *intact groups* (e.g., classrooms) to treatment conditions.

19

Causal-Comparative (Ex Post Facto) Research

- ◆ The groups being studied have been formed according to values associated with the independent variable (the cause) before the research began.
- ◆ There is not (and typically cannot) be random assignment of the independent variable to the groups being studied.
- ◆ Example: ADHD's effect on reading comprehension. (You cannot randomly assign ADHD, it is something you are born with).
- ◆ See [Brock & Knapp \(1996\)](#).
- ◆ See [Brock & Christo \(2003\)](#).

20

True Experiments

- ◆ The groups being studied are formed by the researcher.
- ◆ Individuals are randomly assigned to treatment conditions (within which the independent variable or cause is manipulated to determine if it has an effect).
- ◆ Example: Psychostimulant's effect on the reading comprehension of students with ADHD. (You can randomly assign the treatment (independent variable or cause) and determine its effect on reading comprehension (dependent variable or measure).

21

Quasi-Experiments

- ◆ Groups (e.g., classrooms), not individuals, are randomly assigned to treatment conditions (within which the independent variable or cause is manipulated to determine if it has an effect).
- ◆ Example: Reading Mastery's effect on the reading achievement of first grade students. The researcher randomly assigns the treatment (independent variable or cause) to intact classrooms and determines its effect on reading achievement (dependent variable or measure).

22

The Independent Variable Determines the Type of Group Comparison Study

Research Type	Independent Variable (IV)
Causal-Comparative (Ex Post Facto)	IV not controlled. Present before the research began.
Experimental & Quasi-Experimental	IV controlled. Randomly assigned by researcher.

23

Group Comparison Research Activity: The Effect of Dyslexia on Self-Concept

- ◆ Groups being compared?
 - Dyslexic and non-dyslexic children
- ◆ Independent Variable?
 - Dyslexia is the variable hypothesized to have an effect on self concept
- ◆ Dependent Variable?
 - A measure of self-concept (e.g., Piers Harris CSCS)
- ◆ Type of study?
 - Causal Comparative (Ex Post Facto)
 - The IV is not manipulated by the researcher.
 - Even if it could, you ethically would not randomly assign a disability.

24

Group Comparison Research Activity: The Effect of Counseling on the Self-Concepts of Students with Dyslexia

- ◆ **Groups being Compared?**
 - Students with dyslexia who do, and who do not, receive counseling
- ◆ **Independent Variable?**
 - Counseling is the variable hypothesized to have an effect on self concept
- ◆ **Dependent Variable?**
 - A measure of self-concept (e.g., Piers Harris CSCS)
- ◆ **Type of study?**
 - True experiment
 - The IV is manipulated by the researcher.
 - Individuals are randomly assigned to a treatment condition.

25

Group Comparison Research Activity: The Effect of Classroom Guidance Units on Student Self-Concept

- ◆ **Groups being Compared?**
 - Intact classrooms who do and do not receive classroom guidance units
- ◆ **Independent Variable?**
 - Classroom guidance is the variable hypothesized to have an effect on self concept
- ◆ **Dependent Variable?**
 - A measure of self-concept (e.g., Piers Harris CSCS)
- ◆ **Type of study?**
 - Quasi-experiment
 - The IV is manipulated by the researcher.
 - Groups are randomly assigned to a treatment condition.

26

Activity

- ◆ **Generate three different study ideas that use each of the three different group comparison techniques discussed. Use the following format**
 - Question:
 - Groups:
 - Independent Variable:
 - Dependent Variable:
 - Group Comparison Study Type:

27

Narrative Research

- ◆ The study of how people experience the world.
- ◆ Involves producing a narrative (written account).
- ◆ The narrative is the story of the phenomenon being investigated.
- ◆ Example: The experience of a concentration camp survivor.

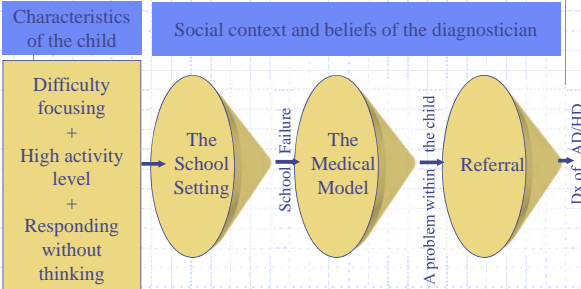
28

Historical Research

- ◆ A past oriented qualitative research method
- ◆ Designed to determine the nature of casual relationships among variables at some point in the past.
- ◆ Makes use of primary and secondary sources
- ◆ Employs interview and record review to collect data.
- ◆ Example: ADHD as a socially constructed disorder.

29

The Social Construction of ADHD



It is an interaction between the social context and beliefs of the diagnostician (the lens through which he or she view the child) and the observable child behaviors that results in the diagnosis of AD/HD.

Ethnographic Research

- ◆ A qualitative research method that studies participants in their natural culture or setting.
- ◆ Focuses on particular sites or settings that provide a context.
- ◆ Employs observations, interviews, and record (document) review to gather data.
- ◆ Example: Crisis response teams in Lodi USD.
 - The [California School Psychologists](#), Vol. 5 (2000)

31

Activity: Classification of Research by Type

Relationship between creativity and achievement.	
Prediction of success in physics based on a physics aptitude test.	
Effect of birth order on academic achievement.	
Self-esteem of males vs. females.	
Attitudes of parents toward lowering mandatory school attendance from 16 to 14.	

32

Activity: Classification of Research by Type

A study of six parents on the cultural patterns and perspective relative to the relationship between anxiety and achievement.	
Opinions of principals regarding decentralization of decision-making.	
Effects of assertive discipline on the behavior of children with ADHD.	
Relationship between time to run the 100-yard dash and high jump performance.	
Effectiveness of daily homework with respect to achievement in Algebra 1.	

33

Activity:
Classification of Research by Type

Attitudes of California teachers toward school based management.	
Effects of socioeconomic status on self concept.	
Effective superintendents.	
Comparative effectiveness of the whole-language method vs. the basal method of reading instruction.	
Trends in reading methods, 1950 to 2000.	
First year sp. ed. teacher's struggle to gain credibility with her staff	

34

The Research Report

◆ <http://owl.english.purdue.edu/owl/resource/560/01/#Your%20Reference%20List>

35

Portfolio Assignment #1

1. Identify three general research topics or "areas of research interest."
2. For each of the three research topics identify several specific research questions.

Example:
Topic 1: Attention-deficit/Hyperactivity Disorder
Q1: ...
Q2: ...
Q3: ...

36

Next Week

- ◆ Selecting and Defining a Research Topic
 - Read *Educational Research* Chapter 2
 - Turn in Portfolio Activity #1: Areas of research interest.

37
