Research Ideas & Literature Review

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The Research Idea

- You find a **research idea** when you find a gap in the current knowledge or an unanswered question that interests you.

Characteristics of Good Research Ideas

- The most important characteristic of a good research idea is that it is **testable**.

- A second characteristic of the good research idea is that your chances for success are increased when your view of nature approximates reality as closely as possible. When reality is approximated there is a good **likelihood of success**.

Sources of Research Ideas

- Nonsystematic Sources
  - Include those occurrences that give us the illusion that a research idea has dropped out of the sky.

Sources of Research Ideas

- ## Nonsystematic Sources

  - ### Inspiration
    - Ideas that pop into one's mind from (seemingly) nowhere. Inspiration usually comes more easily after one has been working on a particular problem for some time.

  - ### Serendipity
    - Refers to those situations where we look for one phenomenon but find another.

  - ### Everyday Occurrences
    - The people and/or situations one encounters daily provide some of the best possibilities for research.

Source: Skinner, B.F. (1961). Cumulative Record (Expanded Edition) p 420. New York: Appleton-Century-Crofts.

Sources of Research Ideas

- Systematic Sources
  - Research ideas from systematic sources are carefully organized and logically thought out.

Sources of Research Ideas

- Systematic Sources
  - Past Research
    - A careful survey of the research done in a specific area will highlight any knowledge gaps or unanswered questions in that area.
      - A *failure to replicate* a previous finding raises additional questions that only continued research will be able to answer.
  - Theory
    - The guidance function of a theory provides an endless panorama of projects for researchers who take the time and trouble to master the theory and understand its implications.
  - Classroom Lectures
    - Lectures often include a systematic review of the relevant literature on a particular topic and as such are a good source of research ideas.

The Nature of Theory

- **A theory in psychology is a set of logically consistent statements about some behavioral**

- phenomenon that

- (a) best summarizes existing empirical knowledge of the phenomenon,

- (b) organizes this knowledge in the form of precise statements of relationships among variables (i.e., laws),

- (c) provides a tentative explanation for the phenomenon, and

- (d) serves as the basis for making predictions about behavior.

- Theories differ in terms of their scope. Some aim to cover broad expanses of

- behavior and are general theories—Erik Erikson's stage theory of how our personality

- is developed and operates throughout the life span is an example. More however, a theory is narrowly focused on some specific aspect of behavior.

- In social psychology, for instance, cognitive dissonance theory concerns how

- people resolve inconsistencies in abnormal psychology, learned helplessness theory

- attempts to account for psychological depression.

- Theories also differ in terms of
- their level of precision, with some being stated in precise mathematical terms and
- others described more simply as a set of logically connected statements.

Attributes of Good Theories

- The most obvious one is **productivity—good theories advance knowledge by generating a great deal of** research

- **Falsification:**In fact, a theory that appears to explain everything is seriously flawed.

- good theories are **parsimonious.**This means, ideally, that they include the minimum number of constructs and assumptions that are necessary to explain the phenomenon adequately and predict future research outcomes. If two theories are equal in every way except that one is more parsimonious, then the simpler one is generally preferred.

Finding a general topic area

3 types of topics

- Topics about groups (preschool children, cats, grandmothers, police officers)

- Topics about a particular behavior (bullying , math anxiety, overeating)

- General topics (job stress, personality, learning, motivation)

Six sources of research topics

1. Personal interest (your favorite course, subject, topic)

Using computers in teaching,

2. Information/observation (any behavior that arouses your curiosity)

Lack of black women in science majors

Six sources of research topics

3. Practical problems (problems in your class, school, job)

Six students failed in my last semester's course

4. Pop ups -fleeting thoughts (falling apples)

Six sources of research topics

5. Readings (books, magazines, web sites, even cartoons, advertisements)

6. Theories   (theories that predict a behavior-opposing theories for the same behavior)

General & Multiple Intelligence theories

Learning Styles

Evaluating the problem

- Effectiveness (can I find an answer?)

Why are black and Latino students behind white and Asians academically?

- Significance (need, importance)

Is there a difference between freshman and junior students in their color preferences?

- Originality (already done)

Which one is more effective? Phonic or holistic approach to reading?

Is parental involvement effective in students' progress?

Does technology help learning?

- Feasibility (competent, access to data, cost, time, difficulties (lack of cooperation)

Longitudinal study of Jewish students in k-12

Replicating a research

1- Justify the replication

2- When your research is just a little different from earlier studies your whole lit review should focus on that LITTLE difference.

3- You cannot show the importance of initial research and not talking about the importance of your addition.

Students' projects

►Want to solve a very important problem quickly.

►So they choose very broad (general) topics
   How to improve quality of education in California?

Students' projects

► Provocative Topics

► If you strongly believe something is good perhaps not a good topic for research, since you already know it is good and effective.

Falling in love

- **Sticking with the first topic** (you may change many times)
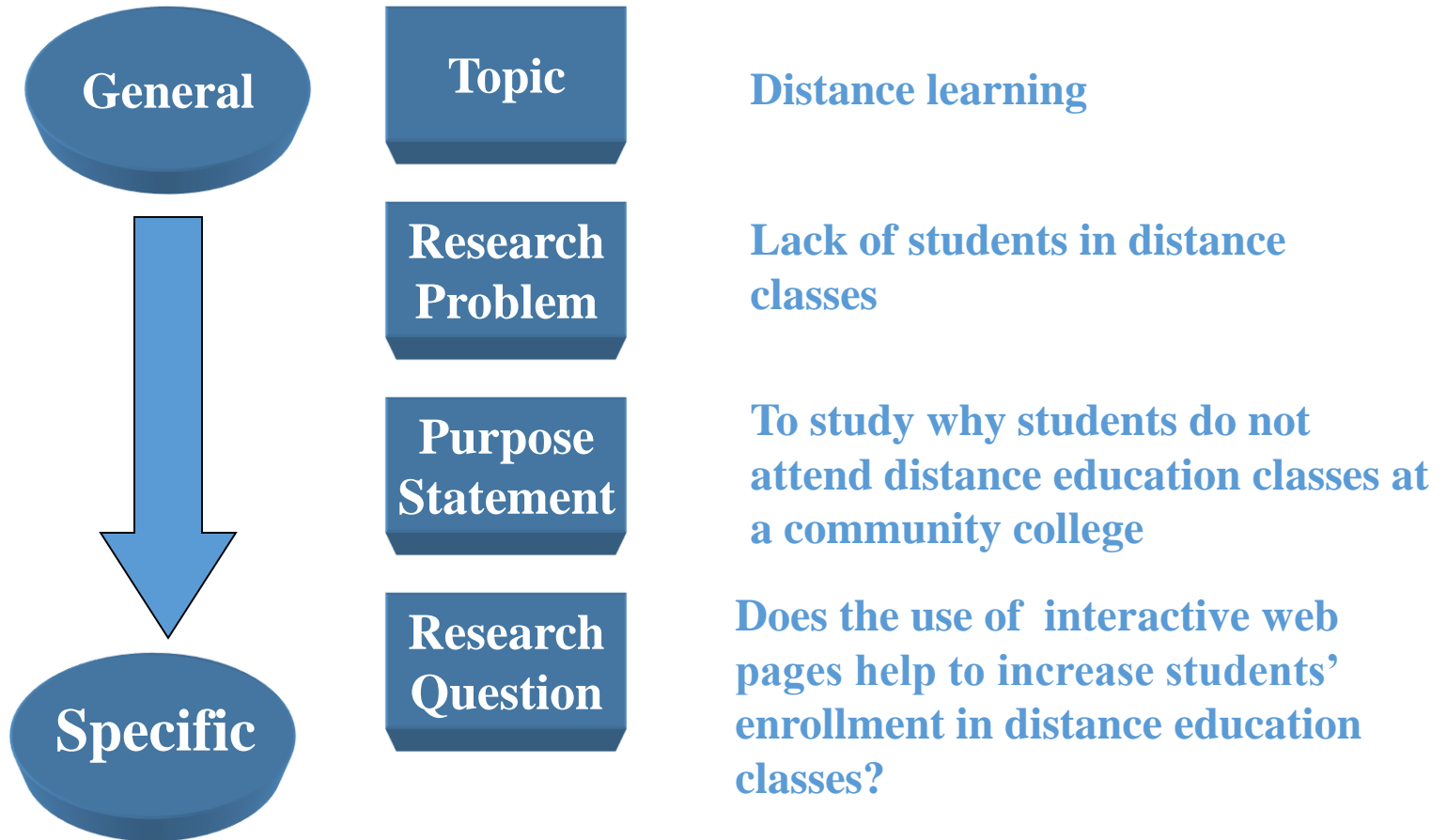
Familiar Topics

- Is too safe or too easy (Something familiar or used in another course)

- Literature review will be all positive

Developing a Research Question

- Regardless of the source of your research idea, your first goal should be to turn it into a question.

- Once you have a question, you need to **survey the literature** to find out what is already known about the question

Parts of Research Article

Differences among the Topic, Problem, Purpose, and Questions

General → Specific		
	Topic	Distance learning
	Research Problem	Lack of students in distance classes
	Purpose Statement	To study why students do not attend distance education classes at a community college
	Research Question	Does the use of interactive web pages help to increase students' enrollment in distance education classes?

Contents of Standard Sections of a Research Article

Introduction
Basic introduction to the topic area   (Statement of the problem – significance of the problem)
Literature review
Research question, purpose, or hypothesis of the study
Brief outline of the methodology
Specific prediction of the study

Method
Participants/Subjects—description of the sample that participated in the study
Procedures—description of how the study was conducted, including a description of the questionnaires and
    equipment used in the study

Results
Findings
Statistical analyses
Figures and tables of data

Discussion
Conclusions
Applications of the research
Ideas for future studies

References
Bibliographic information for each item cited in the article

Primary & Secondary

- A primary source is a firsthand report of observations or research results written by the individual(s) who actually conducted the research and made the observations.

- A secondary source is a description or summary of another person's work. A secondary source is written by someone who did not participate in the research or observations being discussed.

How to Read a Journal Article

Understanding the Format of a Research Paper

- Abstract
  - Brief (150- to 250-word) summary of purpose, method, results, conclusions

How to Read a Journal Article

Understanding the Format of a Research Paper

- Introduction
  - Statement of current knowledge of the area
  - Brief summary of related research
  - Logic behind the study
  - Hypotheses to be tested

How to Read a Journal Article

Understanding the Format of a Research Paper

- Method
  - Description of participants
  - Apparatus and materials
    - Equipment used in the study
    - Stimuli and other materials used in the study

How to Read a Journal Article

Understanding the Format of a Research Paper

- Procedure
  - What the researcher and the participants actually did during data collection

How to Read a Journal Article

Understanding the Format of a Research Paper

- Results
  - Patterns of behaviors among participants
  - Differences in behaviors across groups?
  - Correlated measures

How to Read a Journal Article

Understanding the Format of a Research Paper

- Results
  - Results of statistical tests
    - t-tests
    - Analysis of variance (F-test)
    - Correlations
    - Effect sizes
    - Confidence intervals

How to Read a Journal Article

Understanding the Format of a Research Paper

- Discussion
  - Meaning of results
  - Explanation of participant behavior
  - Participants' psychological processes
  - Relation of results and conclusions to work cited in the introduction
  - Questions still to be answered
  - New ideas to pursue

How to Read a Journal Article

Understanding the Format of a Research Paper

- References (in APA style)
  - Work actually cited in the paper
    - Journal articles
    - Books
    - Book chapters
    - Web sites

How to Read a Journal Article

Understanding the Format of a Research Paper

- References (in APA style)
  - Work actually cited in the paper
    - Personal communication
    - Any other source
  - Important for avoiding plagiarism

Difference

- Secondary sources
1. A textbook, for example, often summarizes 10 years of research, citing several important studies, in a few paragraphs.
2. A meta- analysis, for example, provides a great overview of an area by combining the results from a number of studies.

- Primary sources

Individual research reports that fill 10 to 15 pages in journals are often summarized in one or two sentences in secondary sources.

Start with

Best way: Secondary sources and then choose a few primary sources for more details and a more specific research question.

Easy way: Start with a primary article to easily come up with a tentative research question and then search the literature to come up with specific questions.

Writing the Literature Review

Worst scenario

- Making a list of unrelated or related but fragmented research articles,.

- Jackson (2007) said…..

- Betty (2009) said….

- Thomas (1998) conducted a study about….

The purpose of a lit review

- Each research study is part of an existing body of knowledge
- Your study should be a logical extension of past research
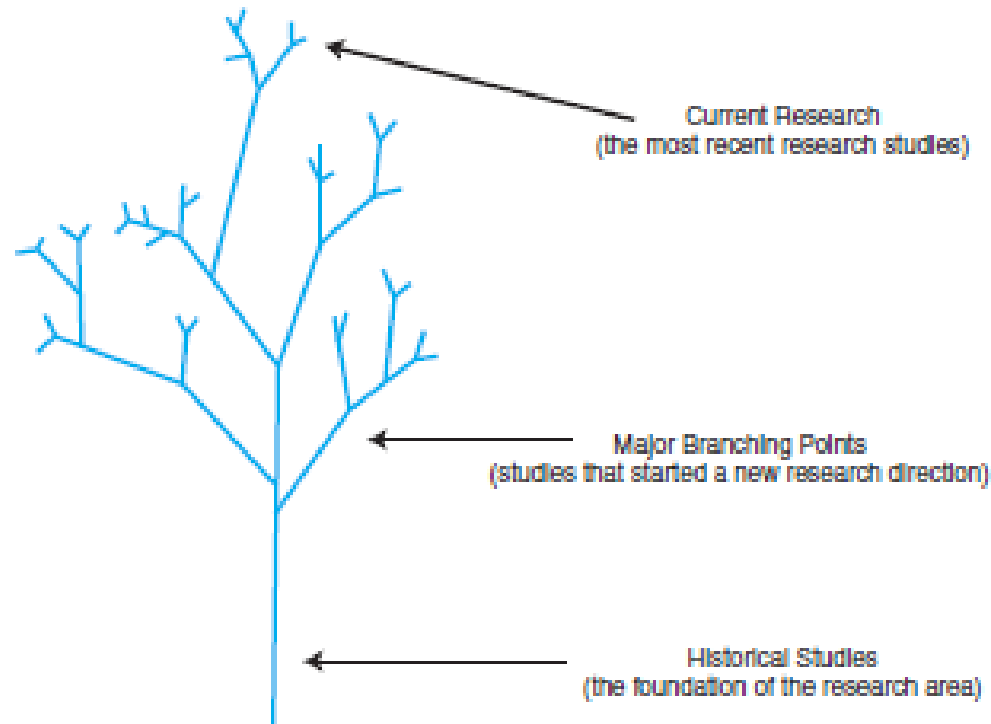
New research grows out of old

FIGURE **2.1** How New Research Grows Out of Old

The tree-like structure emphasizes the notion that current research (the tips of the branches) is always based in previous research.

Literature Map

- You may use a literature map before start writing your literature review.

- A map helps you convey to others , the current picture of the literature on a topic.

The Need for Teaching Programs to Be Culturally Responsive

Bennett, 1995; Eastman, Smith, 1991; Grant 1994; Noel, 1995

Study Abroad Programs

U.S. Programs

Attitudes Toward Study Abroad

King, Young,1994

Possible Improvements

Martin, Rohrlich , 1991; Stachowski, 1991

Personal Insights of Preservice Teachers

Cockrell, Placier, Cockrell, Middleton, 1999; Goodwin, 1997; Kea, Bacon, 1999

Predominately English Speaking Cultures

Mahan, Stachowski, 1990; Quinn, Barr, McKay, Jarchow, Powell, 1995; Vall, Tennison, 1992

Need for Further Study:
Non-English Speaking Cultures

Question: Do short-term study abroad programs in non-English speaking cultures help create cultural responsiveness in preservice teachers?

Conventional Programs

Colville-Hall, Macdonald, Smollen, 1995; Rodriguez, Sjostrom, 1995; Vavrus, 1994

Cross-Cultural Programs

Cooper, Beare, Thorman, 1990; Larke, Wiseman, Bradley, 1990

The purpose of lit review

- The purpose of your literature review is to provide the elements needed for directing (**not just to justify**) your own research study.

- Your literature review should help the reader to predict the purpose of your research before you say it.

Mismatch of goal and lit review

Goal= study the effect of internet on aggressive behavior

Literature= teenagers and their social issues

or

the advancement of technology

or

gender gap

or

racial differences.

Tips on lit review

Tips on lit review

1. **Start with a textbook** or some thing to get the whole picture(narrow down to a chapter) or a review research

2. Make **list of correct terms** keywords, or subject words (foster care not foster home, cyber bully not internet bully)

3. Find **key people or key authors**

Tips on lit review

4- Use the correct database
- PsychInfo
- ERIC

5- Use advanced search

6- Use thesaurus or try different key words (bruxism instead of teeth grinding)

Tips on lit review

5- You may start with a journal article and then search for the references in the article.

6- Use an outline or a research map.

Final words

1- Get a complete reference for each article. (Use RefWorks)

2- If it is a web site get the URL or DOI (digital object identifier).

3- Find suggestions for further research.

4- Criticize, modify , or extend an existing research.

5- Combine or contrast existing results.

6- Look for gaps or contradictions.

Poor Examples

- What is the depression rate among American Indians?

- The goal of my research is to determine the barriers students face?

- Why and how does childhood trauma connect to delinquency in adulthood

- The goal of the current research is to create suicide awareness on all college campuses

Better Examples

- The Effects of CBT Amongst Cyber-Bullied College Students.

- I hope to identify different ways community colleges can support students who are experiencing food insecurity.

- The goal of my research is to have more information on what factors impact persistence rates of black college students .

- The goal of my research is to determine how properly assessments are being applied to differentiate between student having a disability or a student who has a language barrier that plays a role for low achievement.