

AP Seminar Exit Ticket -

You are required to answer all questions, in numbered format, in a document of your choice. Place your answers in a different color than my font.

1. Which of the main disciplines are you interested in and why? What college majors fall within this discipline, and which of these do you have an interest in? Why? Can you cite anything specific in your studies, experiences, and/or observations that is a source of inspiration for you?
2. While you do not have to have a finalized formal research question (not really possible anyway), what topics have sparked your interest? What questions seem worthy of exploring regarding these topics? What kinds of relationships/connections are you interested in exploring? Try and do your best to make a rough draft of your research question, you may make more than one and may have multiple topics with multiple questions as well.
3. What research method types have you researched? If you scroll to the right you will see a brief chart of potential methods. How do these align with your areas of interest? What type of data is involved? How is it collected? What are the potential challenges of this approach?
4. What lenses/perspectives seem relevant to the research topics? Explain (hypothesize) what you expect these different viewpoints to say about your topics.
5. What significant sources have you read so far? How did you evaluate their credibility? What other factors have led to your confidence in your areas of research? Current researchers? Experts in their fields? Universities? Studies already going on? Include an MLA Works Cited along with your annotated bibliography (Minimum of 3)
6. What are your next steps for your research? What are your goals regarding your research this summer? Review the AP Research timeline to help you with identifying specific goals.
7. You will be required to find a "mentor" for the research component that is not your classroom AP Research teacher. Who can you reach out to? What experts can be helpful to you? You do not need to meet with them in person, you may use electronic communications to interact with them. List 3 potential mentors. What steps have you taken to reach out to any of them?
8. Create a problem statement based on the template on the "problem statement page"

Resources to complete assignment

Transforming a Topic or Issue into a Problem Statement

One strategy to help you develop an effective research question, is to organize your ideas into a problem statement. Problem statements are different for every discipline because what is considered a problem in one discipline may not be considered a problem in another. The following represents a series of problem statements that you can use to describe and narrow your topic of inquiry:

Problem Statement Templates

Science/Social Science

- There is a problem in or with _____.
- Despite _____ (something that should be happening), _____ is occurring (provide supporting evidence after this statement).
- This problem has negatively impacted _____ (victims of problem) because _____.
- A possible cause of this problem is _____. Perhaps a study which investigates _____ by a _____ (method) could remedy this situation.

History

- There is a problem in or with the understanding of _____.
- Despite the belief that _____ (something that is general accepted in current scholarship) _____ (something that refutes accepted thinking) (provide supporting evidence after this statement)
- This problem has negatively affected our ability to understand _____ because _____ (provide supporting evidence after this statement).
- A possible cause of the problem is _____. Perhaps a study which investigates _____ through _____ (method) could remedy this problem.

Humanities

- There is a problem in or with determining the root cause of _____
- Despite the pervading theory that _____ (a commonly accepted explanation), _____ has been offered as an explanation (provide supporting evidence after this statement).
- This problem has negatively impacted _____ (something influenced by the theory) because _____ (provide supporting evidence after this statement).
- A possible cause of this problem is _____. Perhaps a study which investigates _____ by _____ (method) could remedy this problem.

Transforming a Problem Statement into a Research Question

Directions

After your instructor reviews the six criteria for effective research questions, work with your group to list three examples you might see in scholarly research papers for each of the criteria. Discuss your examples with the whole group when prompted. Add to your list of examples as necessary.

1. Focused Topic: A narrowed scope of interest

2. Purpose: To explore, explain, or create

3. Variables: Components or elements of a phenomenon that can be counted or measured, or connected to other variables via correlation studies

4. Context/Scope: Specified time, place, population, genre, etc.

5. Value: A statement of importance, significance, or relevance to the body of knowledge of the discipline or to society at large

6. Feasibility: A statement of how this topic of inquiry can be investigated using time and resources available to the researcher.

Thinking Ahead: Developing Research Questions

Directions

1. In preparation for your next lesson, think about topics, problems, or issues that interest you. Develop three research questions that you could use to design and implement a six-month investigation to yield a new understanding about this problem, issue, or topic.
2. Choose one research question to bring to class.

3. List at least three criteria that you used to develop your research questions. Be prepared to talk about your list with your group during your next class.

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Note: You could search existing scholarly, peer-reviewed journal articles to get a general understanding of what research questions look like embedded in academic papers. EBSCOhost database for scholarly, peer-reviewed journals can be accessed below (or via the Digital Portfolio once you have access):

<http://bit.ly/APCapstoneEBSCO>

You could also peruse an undergraduate research paper database to see more examples of research questions and academic papers:

1. Go to **ncurproceedings.org**.
2. Click on any of the journals on the left-hand side of the screen (for example, click on the VIEW JOURNAL link underneath the 2013 Journal).
3. At the top of the new screen, click the SEARCH button.
4. In the SEARCH ALL CATEGORIES FOR box at the top of the screen, type in “civil war” or any other topic you would like to see an academic paper for (leave all other boxes empty).
5. Scroll to the bottom and hit the search button.
6. You’ll see three articles pop up. Click on the PDF link for any of the three, and then you can download that article onto your desktop.

Lesson 3: Big Idea 1: Question and Explore

Developing and Revising Research Questions

Many of the problems students encounter with doing research have to do with poorly written or ill- defined research questions. If the research question fails, the paper fails; it's important to get this right. A simple change in words can help align the research question to what you really want to investigate and ensure appropriate scope, focus, value, and feasibility.

Use the criteria you listed for developing effective research questions from your Thinking Ahead homework assignment to generate responses to the following questions:

What are the steps to take to transform a topic of inquiry or a problem into a well-defined research question capable of yielding a long- term investigation?

What are the critical elements of an effective research question, and how do you know if those elements are present?

“Research” versus “research”

You must be careful when crafting your research question. Your research question must be aligned with the purpose of Capital “R” Research or your work will not demonstrate achievement within the AP Research course.

To clarify:

Little “r” research is basically just searching for literature to develop an argument or stance around an issue or to report on what is known about a problem or question.

- ▶ Questions that look more like debates about controversial issues are little “r” research questions and must be avoided.
- ▶ Questions that can be answered by looking up scholarly works that have already been published are little “r” research questions and must be avoided.

Capital “R” Research is where a student has a well-articulated research method to generate evidence to support a new understanding or new piece of knowledge, which, if someone else “repeated” it, that person could come up with the same understanding and validate the new piece of knowledge.

- ▶ Questions that are narrow, focused, and unanswerable by the literature in the field are Capital “R” Research questions and are required for this course.

AP Research Teacher and Student Dialogue about Research Questions

AP Research Teacher and Student Skit:

AP Research Student: I just love Disney. I want my topic of research to be about Disney.

AP Research Teacher: What about Disney do you love: Disney princesses, Disney theme parks, Disney merchandising, Walt Disney himself?

AP Research Student: Ooooo—Disney theme parks. I just love the theme parks.

AP Research Teacher: What about the theme parks: The food, rides, cosplayers, long lines, costs? Which theme park? (there are so many)

AP Research Student: Oh the one in Orlando. I've been there 100 times. I love that place.

AP Research Teacher: That place is huge. What about it? What do you want to know more about? What will others want to know that is valuable? Is there a problem that needs to be solved with Disney World Orlando?

AP Research Student: The castle: I love the Disney World castle.

AP Research Teacher: What about it: the architecture, the number of people who visit, the effects of Florida humidity on the erosion of the limestone used in the bricks?

AP Research Student: I want to learn more about the actual design of the rooms in the castle.

AP Research Teacher: Which rooms: all the rooms? What about the design: the color palette used, the adherence to historical

criteria? Again, what would people want to know? Is there a problem with these rooms?

AP Research Student: I always wondered why they would have a fireplace in a castle in Florida. I could be the world's foremost expert on that fireplace in the Cinderella Suite in that castle in the Magic Kingdom. But should I inquire about all the fireplaces in all the Disney castles of all the Disney parks?

AP Research Teacher: Again, what isn't already known and would anybody care about this new information?

AP Research Student: Well what if I wanted to study the effects of efficiency of heating and cooling systems in Disney Resort castles and how it affects the costs of staying at those resorts.

AP Research Teacher: Are you prepared to do the math that comes with a correlation study? What if there is already a published study on the heating and cooling systems at Disney?

AP Research Student: I guess I will have to do some digging/searching to find that out.

AP Research Teacher: Do you think the data or information you need is easily obtained? What if there isn't very much searchable information about that castle fireplace or all the Disney fireplaces?

AP Research Student: Gee, I don't know if I have the time OR the money to personally go to all the resort castles and gather the data myself. I wouldn't even know who to talk to.

AP Research Teacher: So now what?

In order to develop your problem statement you must first narrow a topic and have the beginning of a rough research question. Before that, you must first identify what type of researcher you are. Begin the workbook exercises below.

Directions:

This activity was adapted from the "Choosing Your Research Project" activity from <http://dissertationrecipes.com>

Lesson 2: Types of Researchers-Survey

1. Read each statement below and indicate on the accompanying Likert-type scale how strongly you agree with each declaration. Note that this questions are intentionally complex and force a commitment to one view rather than allowing for a neutral or a no opinion option:

T: To truly understand the AIDS epidemic, one must ascertain the truth about AIDS. A researcher must look at the data, make recommendations for further study based on these findings, and not base conclusions on information obtained through subjective means or anecdotal stories that rely too heavily on his or her personal feelings.

disagree totally		agree totally		
1	2	3	4	T = _____

F: To truly understand the AIDS epidemic, one must look at the individuals afflicted with the disease and note the similarities and differences that exist between those tormented with AIDS. Recommendation for further study should be based on the immediate needs of those individuals as well as how the researcher feels he or she could best be personally involved.

disagree totally		agree totally		
1	2	3	4	F = _____

S: To deal with environmental problems, one should look at the methods available and determine the most practical way to solve these problems now and not spend the time on some vague plan in the unspecified future.

disagree totally		agree totally		
1	2	3	4	S = _____

I: To deal with environmental problems, one should look at all the possibilities that exist now and, more important, could exist and take a broad, long-range view of the situation. A quick fix to the problem should be avoided.

disagree totally		agree totally		
1	2	3	4	I = _____

2. To discover your research typology:

- a. Enter your T, F, I, and S numbers in the spaces provided below in the table.
- b. Fill in the remainder of the table by computing the sums of:
 - i. T + I in cell I
 - ii. T + S in cell II
 - iii. S + F in cell III
 - iv. I + F in cell IV
- c. Your research style(s) is (are) the cell(s) with the largest sum.
- d. Underline the style(s) with the largest sum (Types I, II, III, or IV)

	T-value: _____	F-value: _____
I-value: _____	I. (T+I) _____	IV. (F+I) _____
S-value: _____	II. (T+S) _____	III. (F+S) _____
	I. Conceptual Theorist	II. Analytical Scientist
	III. Particular Humanist	IV. Conceptual Humanist

Type of Researcher	Brief Description
I Conceptual Theorist	Holistic and imaginative-believes in TOE (Theory of Everything)
II Analytical Scientist	Preference for exactness, precision, and unambiguous situations
III Particular Humanist	Humans are too complex to study as a whole
IV Conceptual Humanist	Knowledge exists to better humanity

3. Read about your research style(s) below and evaluate the strength of the descriptions and your computed style with how you feel you engage in inquiry.

I. Conceptual Theorist.

- a. This type of researcher believes in TOE, i.e., the Theory of Everything. A conceptual theorist is holistic and imaginative. He or she believes in multiple causations and the development of a coherent testable framework through large-scale correlation. Science holds a definite privilege in this type of thinking but it is not the only way that a conceptual theorist views a problem.
- b. Motto: Intellectual conflict is an important characteristic of research and should not be dismissed. Such conflict is vital to the development of both methods and theories.
- c. Methodologies that would likely appeal to a conceptual theorist: correlational studies, factor analyses, descriptive research, repertory grid analysis, Q-methodology, and Delphi study.

- d. Research topics that would likely appeal to a conceptual theorist if asked to choose a research topic on smoking and health: Determine the correlation between smoking and diseases, smoking and personality types, why people smoke, and as many multiple correlations as one can ascertain between smoking and other factors.

II. Analytical Scientist.

- a. This type of researcher prefers exactness, precision, and unambiguous situations. Science is also paramount and exact in this type of thinking. The analytical scientist sees science as ruled by nature. The ideal experiment is one where all variables are controlled.
- b. Motto: In order to label something a scientific theory, it must be cast into a logical form so that, given the proper antecedent conditions (X, A), one can make the valid deduction (Y). Otherwise (according to the analytical science view) it is nonscientific.
- c. Methodologies that would likely appeal to an analytical scientist: experimental design, quasi-experimental design, semiotics, trend analysis, design-based research, regression-discontinuity design, and retrospective record review.
- d. Research topics that would likely appeal to an analytical scientist if asked to choose a research topic on smoking and health: Determine definitively if cigarette smoking causes cancer. Simulate smoking in laboratory animals and determine if cancer is caused.

III. Particular Humanist.

- a. This type of researcher prefers personal knowledge to rational knowledge. Science is not privileged in this type of thinking and is subordinate to other disciplines such as poetry and literature. The particular humanist believes that humans are too complex to study as a whole.
- b. Motto: It is absurd to think that science has remained immune to outside influences. The challenge is to develop a methodology that does justice not only to the humanity of the participants studied but to the researcher as well. Only a person who is passionately involved in his or her research can make a difference.
- c. Methodologies that would likely appeal to a particular humanist: case study, appreciative inquiry, action research, semiology, phenomenology, grounded theory, critical incident technique, and hermeneutics.
- d. Research topics that would likely appeal to a particular humanist if asked to choose a research topic on smoking and health: Study a smoker and determine why this person started smoking and any ill effects attributed to smoking. Have cancer patients who have smoked keep a diary and study their feelings and concerns.

IV. Conceptual Humanist.

- a. This type of researcher prefers holistic knowledge. Science has no special privilege in this type of thinking. Knowledge exists only to better humanity. To further understand humanity, a conceptual humanist believes that one must study human behavior from many points of view and constantly develop new approaches to improve human life based on these observations.
- b. Motto: The question is not, "Is storytelling science?" but "Can science be used for the betterment of humanity?"
- c. Methodologies that would likely appeal to a conceptual humanist: grounded theory, phenomenology, evaluative case study, causal comparative research, historical research, appreciative inquiry, content analysis, Delphi method.
- d. Research topics that would likely appeal to a conceptual humanist if asked to choose a research topic on smoking and health: Survey ex-smokers and determine the most effective ways each person was able to stop smoking. Use this information to develop a program to help people stop smoking.

4. Look at the *Choosing Your Research Method* table below and answer the following questions:

- Which three methods appeal to you the most and why?
- Which three methods appeal to you the least and why?

Research Method	Brief Description	Type
Case Study research	Group observation to determine how and why a situation exists	III
Content analysis	Analyze text and make inferences	IV
Correlational research	Collect data and determine level of correlation between variables	I
Delphi research	Analysis of expert knowledge to forecast future events	I, IV
Descriptive research	Study of “as is” phenomena	I
Ethnographic	Cultural observation of a group	
Evaluation research	Study the effectiveness of an intervention or program	IV
Experimental research	Study the effect of manipulating a variable or variables	II
Factor analysis	Statistically assess the relationship between large numbers of variables	I
Grounded Theory	Produce a theory that explains a process based on observation	III, IV
Hermeneutic research	Study the meaning of subjects/texts by concentrating on the historical meaning of the experience and its developmental and cumulative effects on the individual and society	III
Historical research	Historical data collection and analysis of person or organization	IV
Meta-analysis research	Seek patterns in data collected by other studies and formulate principals	
Narrative research	Study of a single person’s experiences	
Needs assessment	Systematic process of determine the needs of a defined demographic population	
Phenomenography	Answer questions about thinking and learning	
Phenomenology	Make sense of lived experiences of participants regarding a specified phenomenon.	III, IV
Semiology	Study the meaning of symbols	II, III
Trend Analysis research	Formulate a forecast based on regression analysis of data	II

Reflect

- ▶ To what extent do you believe your identified type of researcher, motto, research topics, and associated methods align with how you feel you actually engage in everyday inquiry?

- ▶ What do you believe (if any) are the potential challenges with engaging in research methods that do not align with your natural way of inquiry?
