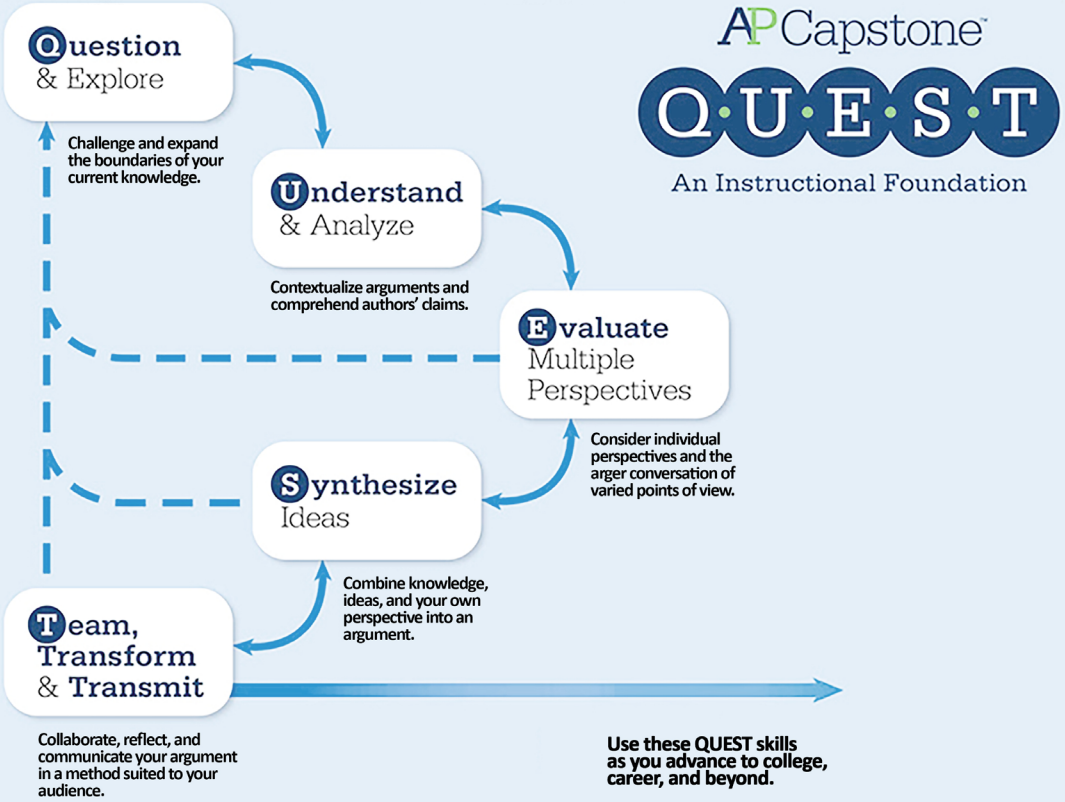
Epistemic Worldviews and Research Approaches

Module 1, Introduction to Capstone, AP Seminar

What is Research?

Research, simply defined, is a process for investigating a problem using an accepted method or formal system for producing knowledge to fill a gap in understanding.

The College Board QUEST Model



AP Capstone
Q·U·E·S·T
An Instructional Foundation

Knowledge and Understanding

A Quick Introduction to Epistemology

- **Epistemology:** theories, studies, philosophical investigations into 'knowledge'
  - *Questions: What is knowledge? How does one come to 'know' something?*
  - Goal: to give a set of "necessary and sufficient conditions for claiming 'to know' something (aims at widely-accepted conditions)
  - The 'gold standard' of achieving knowledge: *justified, true belief*
- **The role of Research:** a particular approach (resting on assumptions and acceptance of systems) to securing knowledge

The High Threshold

Defining "Justified, True Belief"

Justified = verifiable through evidential support [note: often systematically acquired]

True = "what actually is—*in fact*—the case" [note: requires metaphysical standpoint]

Belief = something "held to be the case" [independent of Truth, but often the intersection of *Justification* and *Truth*]

Education and Learning

An Example

- Each subject taught in school follows its own *schema* for knowledge
  - **Sciences:** scientific methods
  - **Mathematics:** conceptual proofs and numerical relationships
  - **Language Arts:** rhetorical analysis
  - **Social Sciences:** social research methods
- Understanding lies in the interaction between information-as-given, the investigator's personal background beliefs and approaches to knowledge, and those of the audience to which they share the contextualized information
- Personal perspective, approaches, and epistemic beliefs play a role in the *kind* of investigation and/or argumentation or evidence a student/researcher will accept [in other words, one's Epistemic Worldview]

Example: *if I believe knowledge only comes from sense experience, certain personal, spiritual, intuitive experiences may constitute lesser forms (or non-forms) of knowledge—as a result, likely to investigate areas of knowledge produced by scientific methodology*

Select Research Approaches Consistent with Epistemic Worldviews

1. Positivism
2. Constructivism
3. Interpretivism
4. Hermeneutic
5. Post-modernism

*these views, and introductions to them, adapted from Michael Crotty's Foundations of Social Research

1 Positivism as a Research Approach

Name meaning: "Something that is posited" (i.e., assumed as the basis for an investigation, *not* the outcome of it)

- Objective in approach: assumes there *is* a true world to be discovered independent of human perception, but can be known through observation and experimentation
- **Method:** scientific, systematic testing; interest in principals and 'essential facts'; avoids personal perception, feeling, assumptions, context

2 Constructionism as a Research Approach

Name meaning: "Something that is *constructed*" (i.e., world has potential meaning, conscious mind *endows* experience with it—not *inherent*)

- Objective, but not *merely*: objective world *exists*, and human perception interacts with it (there are things to know, but *knowers* must interact with it from limited contexts)
- Subject-object interaction = intentionality (i.e., minds interact with world through relation, reference, direction, positionality)
- Context is necessary, interpretation is the means: no *true* interpretation, only *useful* interpretations
- **Method:** quantitative studies, aim for generalizing concepts *from* replicable experiences and provided subjective information (e.g., surveys)

3 Interpretivism as a Research Approach

Name meaning: foil to positivism, looks for culturally-derived and historically situated interpretations in a *social* world (not an objective one)

- Natural reality ≠ Social reality, and thus require different means of investigation
- **Methods:** not in causality; focus on relations, correlations, investigations into social actions, phenomena (case studies, observations of human phenomena, interviews); cultural studies

4 Hermeneutic Approach to Research

Name meaning: role of language in human behavior (sub-type of interpretivism)

- Language shapes experience, experience shapes language
- **Methods:** textual studies and analyses, text as 'living thing'; concept and content analysis and effects of language on understanding as a "fusion of horizons" (dialectic models); research in the arts

5 Postmodernism as a Research Approach

Name meaning: contrast to 'modernism' (specifically Enlightenment thinking and reliance on rationalism and observable patterns in social truth, understanding)

- Rejects "dominant foundational program of the Western tradition"
- **Methods:** Relies on "play" and deconstruction of accepted 'norms' of knowledge; skepticism, rearrangement; emergence of critical lenses responsible for gender, racial theories, and approaches

AP Capstone, Research and Critical Writing as Foundational

An Example

- Assumption of the program rests in justified, true belief
- Critical approach: knowing subject matter + knowing self-as-investigator + knowing intended (and unintended) audience
- Defining "Critical"
  - *Not* 'criticism' or 'critical' in sense of cynical judgment or "nit-picking"
  - From ancient Gr: "to judge"- beyond opinion, tested, measured, informed belief
  - Rests in deep-level learning, critical awareness

Surface-level vs. Deep Learning

Surface-level

- Recall facts, information
- Tasks as ‘tests of memory’
- Concern with ‘meeting requirements’ or completion
- Relies on reproduction, generalities

Deep

- Need for understanding over regurgitation
- Readiness and willingness to explore
- Acceptance of chaos, desire to find (or construct) patterns/order
- Curiosity, and dedication to time and consideration

Critical Research Approach

A Process Overview

Important Keys to Good Research Mindsets

- Bracket personal feelings
- Examine a lot of different angles
- Check and recheck for accuracy
- Check logic, systemic understanding (key is knowing epistemic approach)
- Look for potential flaws
- Aiming to find consensus, common ground
- Fact-checking against interpretations
- Understanding process for collection, analysis of information-as-given
- Reviewing, investigating undeclared assumptions, biases
- Consideration of alternatives

Who Are You As a Researcher?

Begin by providing a self-introduction with a focus on your personal worldview - consider such things as your cultural background, values that have been instilled in you via family, environment, school, etc., what your beliefs about knowledge and understanding are, and how you explore the world. Then, discuss how those beliefs, values, etc. play into your areas of personal, academic, and future career interests.

Who Are You As a Researcher? (part 2)

Consider how your views manifest a specific approach to those personal, academic, and future career interests in addressing the following questions:

- In what ways do you gather data or information in order to 'know' or 'understand' something in those areas of interest?
- How do you prove (or accept proof) of a truth in these areas of interest? In other words, what is 'quality' work in these areas?
- Do you believe that one 'way of knowing' is better (or more preferred or justified) than others? Justify your thoughts here.
- What kinds of biases do you hold, and how will you work to ensure that they do not impact an objective approach to inquiry in your areas of interest?

Who Are You As a Researcher? (part 3)

Finally, reflect on areas of strength and how those strengths will become an asset to what you know about this program at this time. Also, reflect on areas of weakness and how the program can help you develop these weaknesses. Then, discuss areas of interest, CTE skills, pathways, etc., that may become avenues of research for you in this program.