

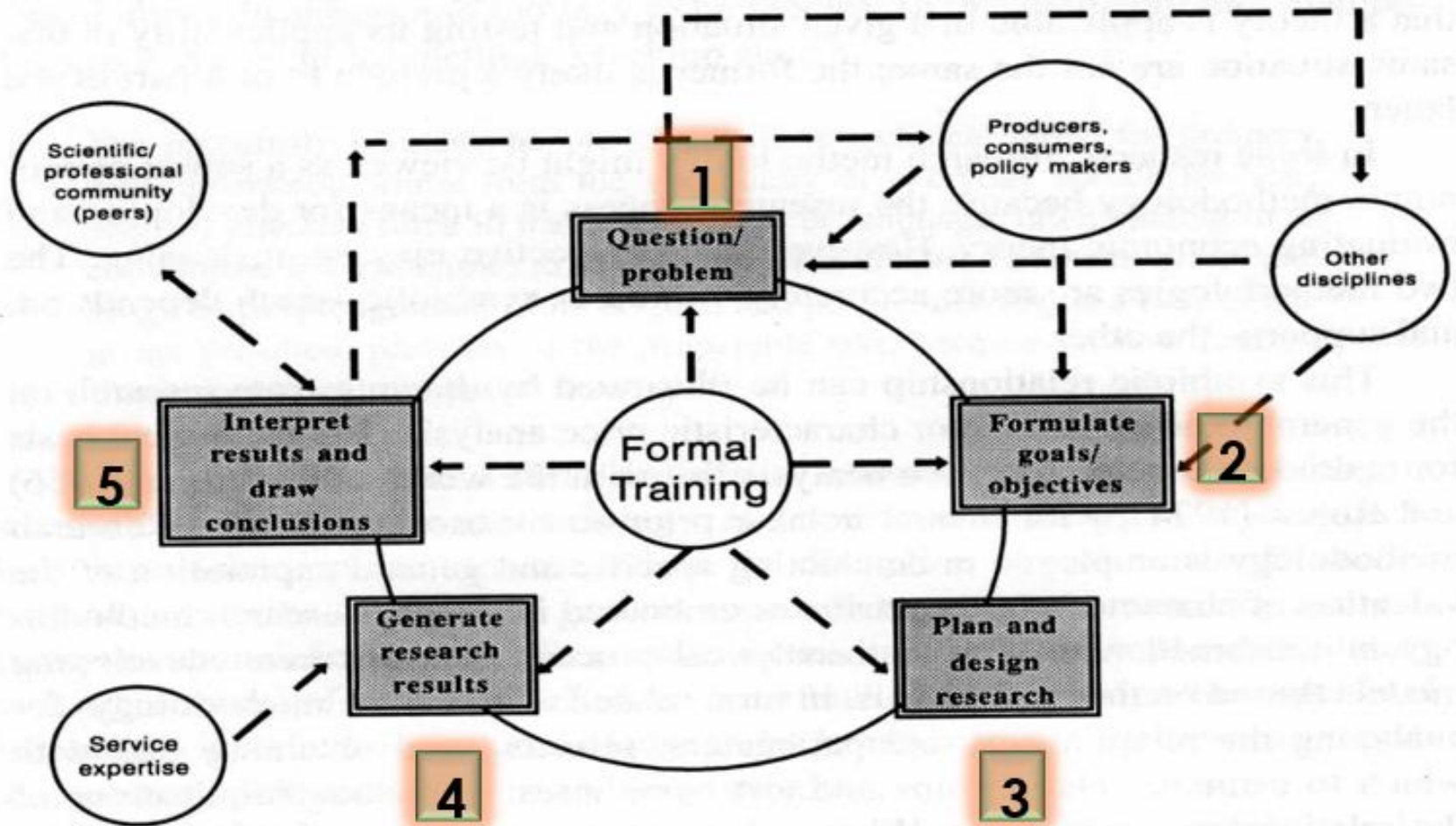
Materi 2

Metodologi Ilmiah



Program Studi S1 Informatika
Fakultas Ilmu Komputer UPN “Veteran” Jawa Timur
TA. 2022/2023 Semester Gasal

Introduction



Identify & Refine your Topic

Using your assignment as a guide, brainstorm several interesting subjects. Refine those subjects into one topic by listing keywords, similar words or phrases, and broader and narrower words.

Sample Assignment:

Find an area of interest and write an in-depth, research report (4-6 pages) that investigates a significant issue within that discipline.

Sample Topic:
"What effect does television
have on the eating habits
of children ?"

Keywords & Related Words:
Television
eating habits
children

What information do you need ?

1. Do you need facts, figures, statistics?
2. Do you need a general overview of the topic?
3. Does your information need to be very current?
4. How in-depth does your research need to be?
5. Do you need to consider different or conflicting points of view?

Search Strategies

1. Use encyclopedias and dictionaries to find background information on your topic.
2. Use the library's many databases to find in-depth information in books and journals.

Evaluate your information

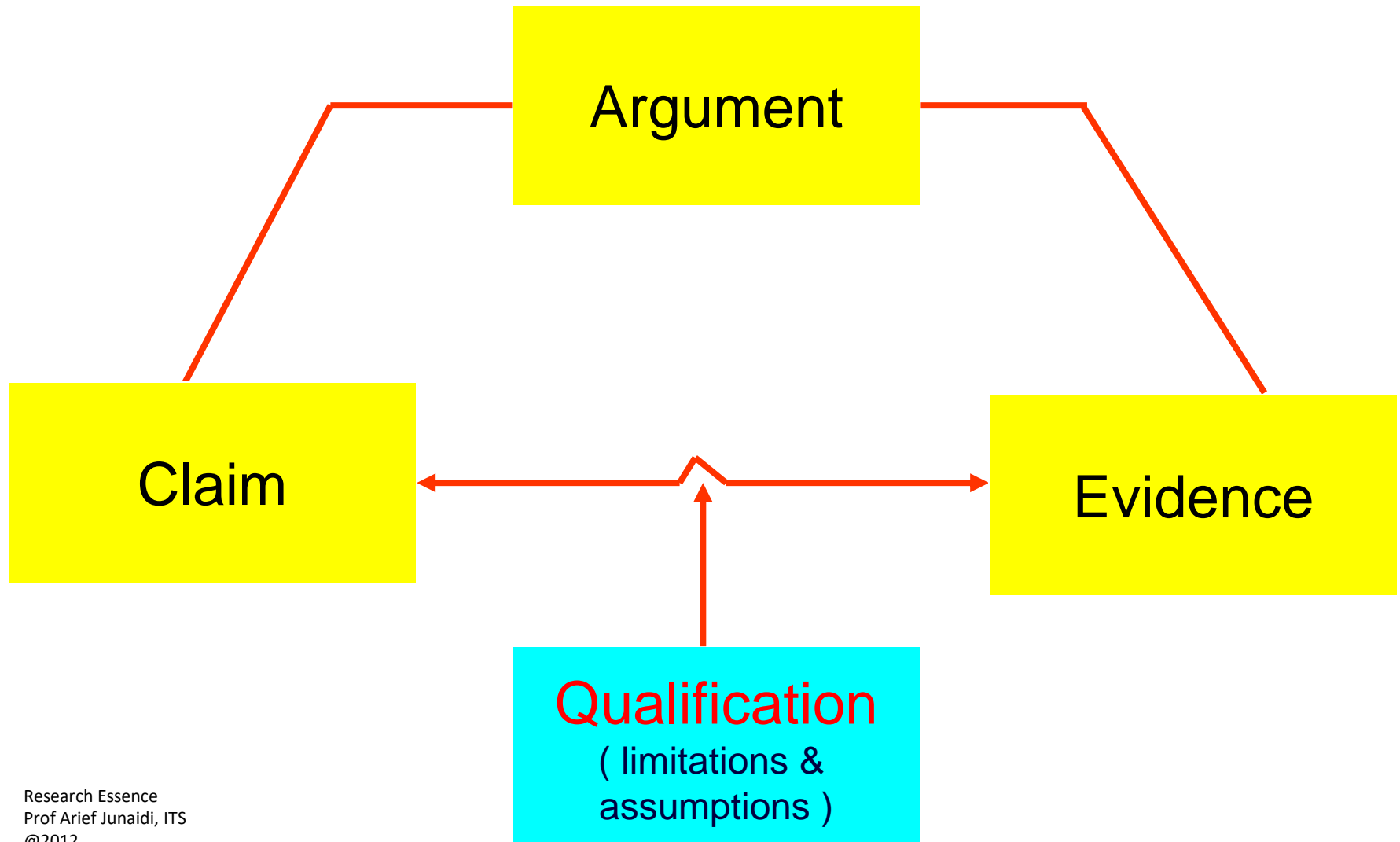
Everything that is written has at least some bias or point-of-view. You need to evaluate how much that *bias affects the content* of the article or website.

- Who is the author?
 - Did the author have any authority in what they wrote? What credentials do they have?
- Why was the article written?
 - Many articles and websites were written to present specific arguments or theories. Make sure you know if the information you are using was written for a specific purpose.
- Where was it published?
 - Was it published in a peer-reviewed, scholarly, or otherwise authoritative journal? Or, merely on someone's personal website?
- When was it published?
 - Obvious, yes. But, make sure that the website you use is not outdated.

Idealized Research Process

- **Claim:** Find a “Question” to seek an answer for and anticipate the answer
- **Method:** Choose an appropriate research method and make flexible plans
- **Evidence:** Gather the data, do the experiment, build the prototype etc.
- **Contribution:** Analyse, interpret, and conclude
- **Argument:** Write the report
 - Importance of “writing” (aided by thinking from the point of view of your readers)

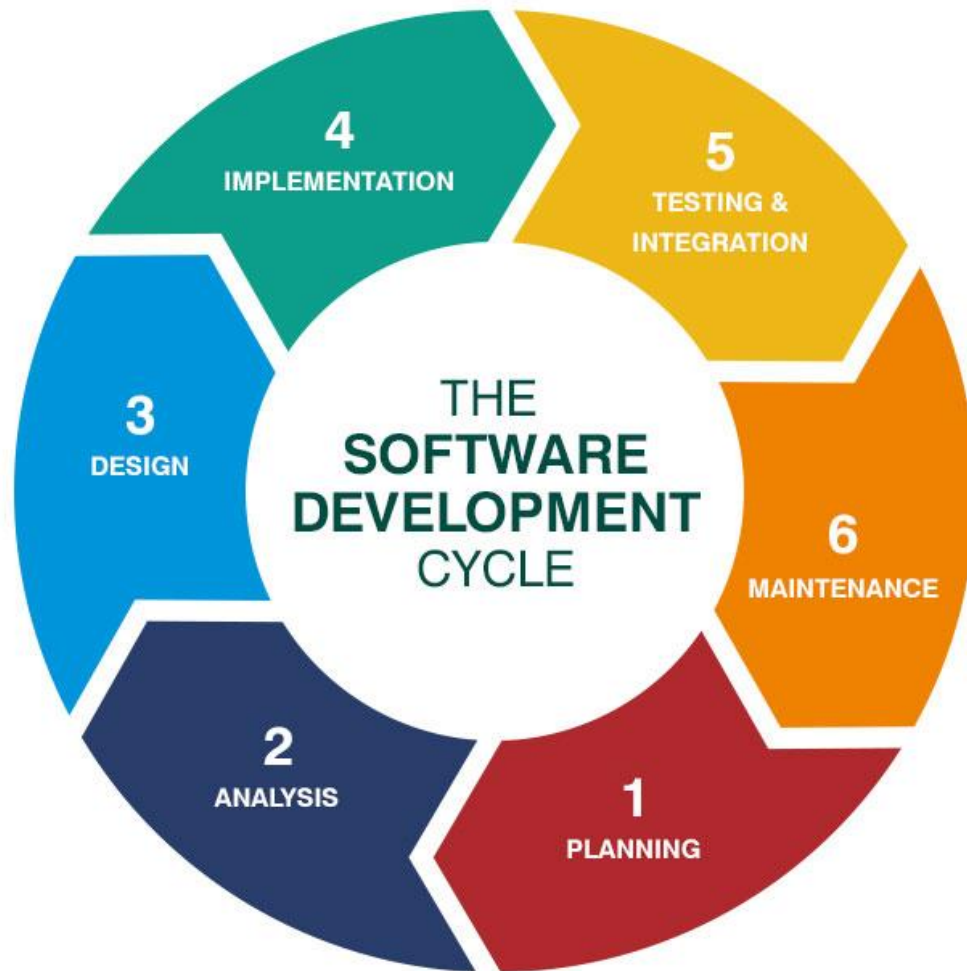
Making Your Case



Characteristics of good and poor research projects

<i>Good project</i>	<i>Poor project</i>
Good literature review	Poor/uncritical literature survey
Sound primary research	Poor/little primary research
Logical structure	Disorganized structure
Analytical	Descriptive
Theory integrated	Theory tacked on
Underpinned by conceptual framework	Little/no conceptual framework
Integration between methodology, literature, analysis, conclusions. Etc.	Little/no integration between elements

Software Development Methodology





Thank You!
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