



Research and Academic Writing Method

Research: Step by Step

Hassan Bevrani

Professor, University of Kurdistan

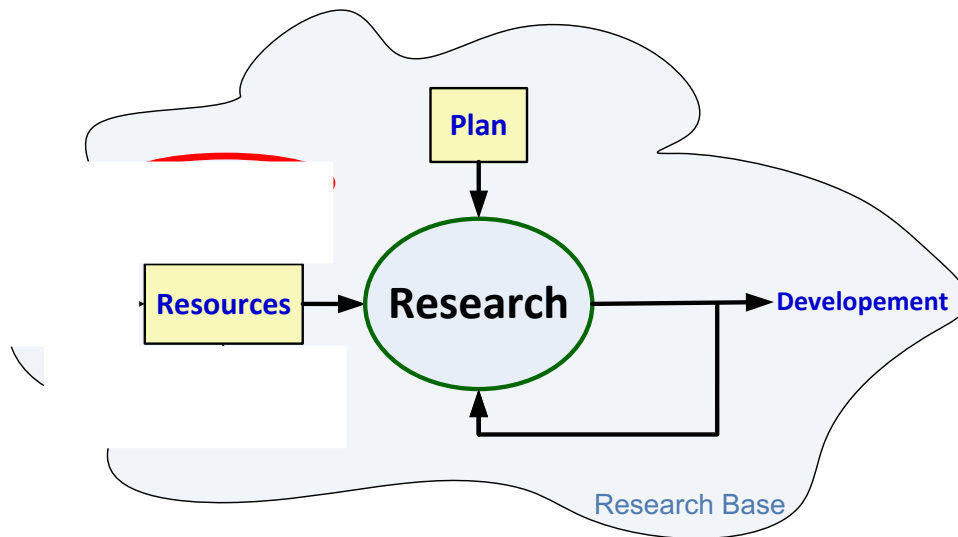
Spring 2024

Introduction

Research



Research as a Control System



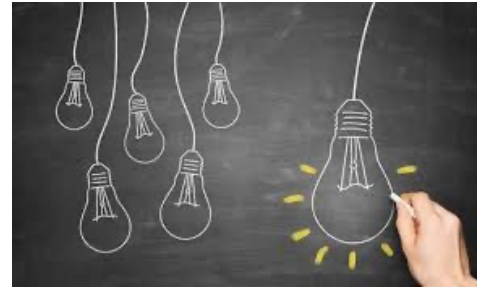
Why Research?

- Get an education degree
- Get a scholarship, a fund, a prize
- Get promotion
- Prove new ideas, find new solutions



Why Research?

- Improve your CV
- Become known as expert in an area
- Investigate rules, discoveries
- Develop new products, save costs, improve our life, ...



Research Road!

- **Realize** existing ideas
- Present **new/original** research result
- **Different solution** for a problem



Research Road!

- **Develop** new algorithms/methodologies
- **Confirm** new algorithms/theorems
- **Compare** different methodologies
- **Design** new products

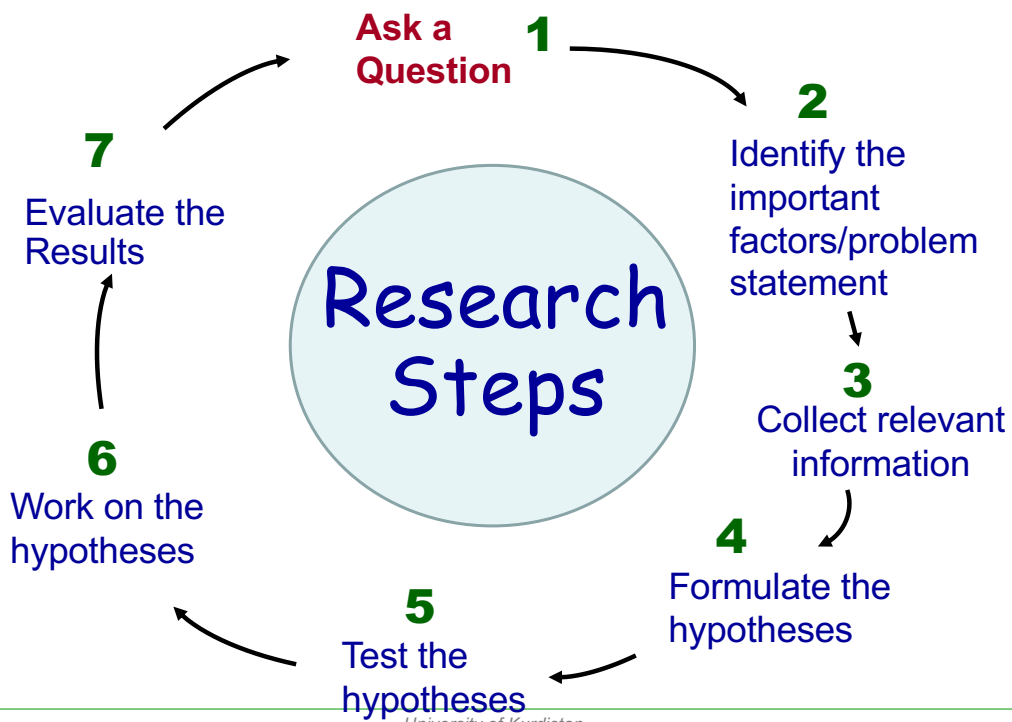


Research Road!

- **New application** of the theorems
- **Improve design** of existing products
- Study on **new aspects**



Research Steps



Research Steps in Engineering

Start:
Choose a subject/topic



Research Steps in Engineering

Literature Review

Start:
Choose a subject



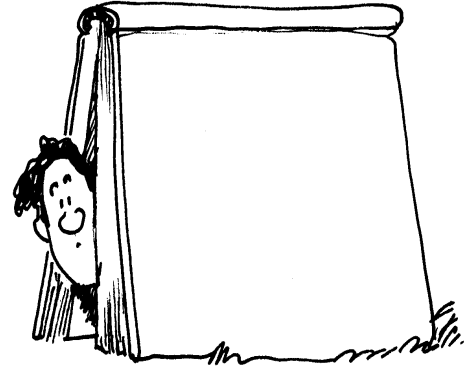
Literature Review

- Is it **update**?
- Is it a **credible** source?
- Is the subject **relevant**?

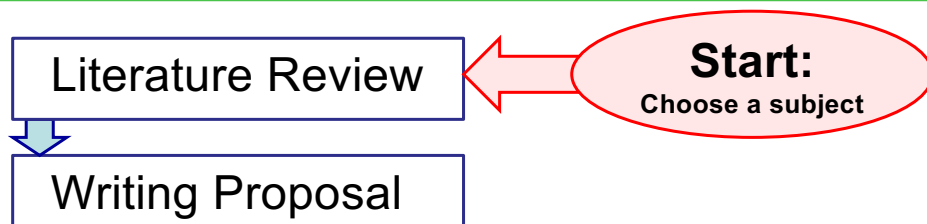


Literature Review

- Identify **leading research groups**
- **Clustering**
- **References**



Research Steps in Engineering



Proposal: Required Methods and Tolls

Finding useful Tools and Methods



Proposal: Timing Program

Activity	Month/ week/Days											
	1	2	3	4	5	6	7	8	9	10	11	12
1	x	x										
2		x		x		x		x		x		
3			x	x	x							
4				x	x	x	x	x				
5							x	x	x	x		
6										x	x	x



Proposal: Timing Program Example

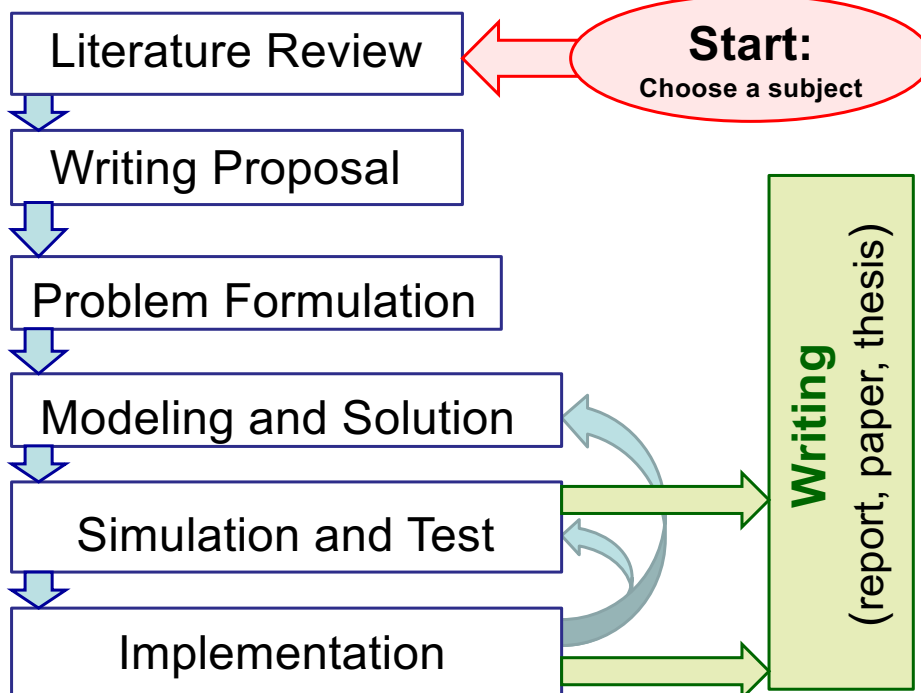
Timing Program: Osaka University, August-September 2012

21:00-23:00	14:00-19:00	08:00-13:00	Date	Day
background	paper (14:~) + review	Review & talks	8/20	Mo
~	shimai (14:~) + review	Review & talks	8/21	Tu
~	Meeting	Review	8/22	We
~	paper (14:~...)	presentation	8/23	Th
Tests & Lab	shimai (15:~...)	talk with Nelson	8/24	Fr
Review	Test in Lab	PRELIM	8/25	Sa
Review	Evaluation	document	8/26	Su
~	Experiment (14:00~...)	Evaluation	8/27	Mo
~	Paper (15:~)	with Prof Tsuji	8/28	Tu
Test	Party (5 pm-)	daily meeting	8/29	We
Think & Test	Wind view	Wind view (09:30~...)	8/30	Th
~	shimai (17:30~) / Amber (17:~)			
~	Dr. Nakanabe	talk & see	8/31	Fr
Special Strength	Kabetsu (17:00~)	Kabetsu	9/1	Sa
Evaluation	Kagawa (14:~...)	Meeting	9/2	Su
think & Test	meeting with Prof. Ite	Prof. Mura	9/4	Tu
Think & Test	with Minata Sasaki	Dr. Kagawa	9/5	We
Evaluation	Seminar (15:00) E1 or E3	seminar preparation	9/6	Th
Evaluation	meeting (15:~) with Kagawa	preparation	9/7	Fr
-	Kumamoto Hotel Castel	Kumamoto trip	9/8	Sa
-	Came back from Kumamoto	talks	9/9	Su
Evaluation	documentation	documentation	9/10	Mo
Round	Nara	Prof. Tsuji (12:00~...)	9/11	Tu
Talk & show	Evaluation	10:00 nagasaki	9/12	We
preparation	Prof. Ite & Mura	Final check	9/13	Th

H. Bevrani

17

Research Steps in Engineering



H. Bevrani

University of Kurdistan.

18

Thank you!

