UHS 2021
TRIZ : 40 Inventive Principles

by

IMADUDDIN ABIDIN

Centre Modern Languages and Human Sciences

imaduddin@ump.edu.my

Learning Outcome

- Expected Outcome

  Students will be able to understand and apply 40 inventive principles in solving any engineering problems or contradictions

- References

Yeoh, T.S., Yeoh, T.J. & Song, C.L. (2016). ***Theory of Inventive Problem Solving; TRIZ.*** Firstfruits Sdn. Bhd., Malaysia.

1-5 Inventive Principles

Segmentation

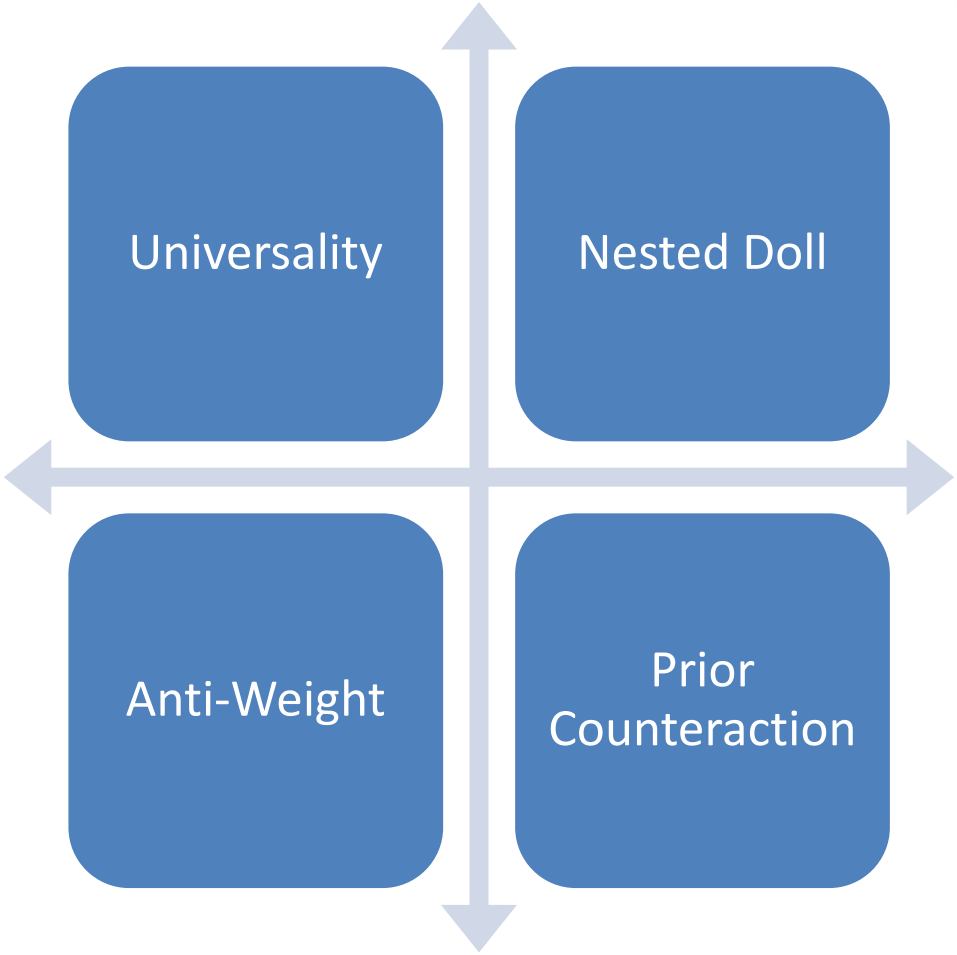
Taking Out

Local Quality

Asymmetry

Merging

6-9 Inventive Principles



10-12 Inventive Principles

	Prior Action	
Cushion in Advance		
	Equipotentiality	

13-15 Inventive Principles

The Other Way Round

Curvature

Dynamics

16-18 Inventive Principles

Partial or Excessive Action

Another Dimension

Mechanical Vibration

19-23 Inventive Principles

Periodic Action

Continuity of Useful Action

Rushing Through

Blessing in Disguise

Feedback

24-26 Inventive Principles

	Intermediary
Self-Service	
	Copying

27-29 Inventive Principles

- Cheap Short-Living Object
- Replace Mechanical System
- Pneumatics and Hydraulics

30-32 Inventive Principles

	Flexible Membranes/Thin Film
Porous Materials	
	Colour Change

33-37 Inventive Principles

Homogeneity

Discarding and Recovering

Parameter Change

Phase Transition

Thermal Expansion

38-40 Inventive Principles

- Accelerated Oxidation
- Inert Atmosphere
- Composite Materials

Conclusion of The Chapter

- 40 Inventive Principles in TRIZ is a general solution that can be deployed in solving engineering contradiction.
- More than one inventive principles can be suggested to any engineering contradiction or problem.

Imaduddin Abidin is a
TRIZ Certified Trainer
He can be contacted at
imaduddin@ump.edu.my