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COLLEGE OF ENGINEERING

DETAILED LECTURE NOTES

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Learning

Components of intelligence

- Reasoning
- Learning
- Perception
- Linguistic Intelligence
- Problem Solving

Learning - It is the Activity of gaining knowledge or skill by studying, practicing, using target, or experiencing something.

- Simplest is learning by "trial and error".
- The solⁿ keeps on solving problems until it comes across the right results.
- The simple **memorizing** of individual items by procedures - known as "Rote learning".

Role learning

- memorization technique based on Repetition.
- Should have database
- Works on situations (problems) encountered earlier or past data only.
- Fails if new situation apart from previous situations arises.
- Role learning is relatively easy to implement on a computer
- eg. Memorizing Multiplication tables, Periodic tables, Science or maths formulae

Generalization learning

- It involves applying past experience to comparable new situations.
- The learner able to perform better in situations not previously encountered.
- Sophisticated modern techniques enable programs to generalize complex rules from data.

Case Study: For eg: A program that learns the past tense of regular English Verbs by rote learning will not be able to produce the past tense of new word group



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whereas a program under generalization learning
can learn and form the past tense of jump
jump = jumped.

- As it follows the rule: add "ed" rule.
- based on experience with similar verbs.
- Teach it rules