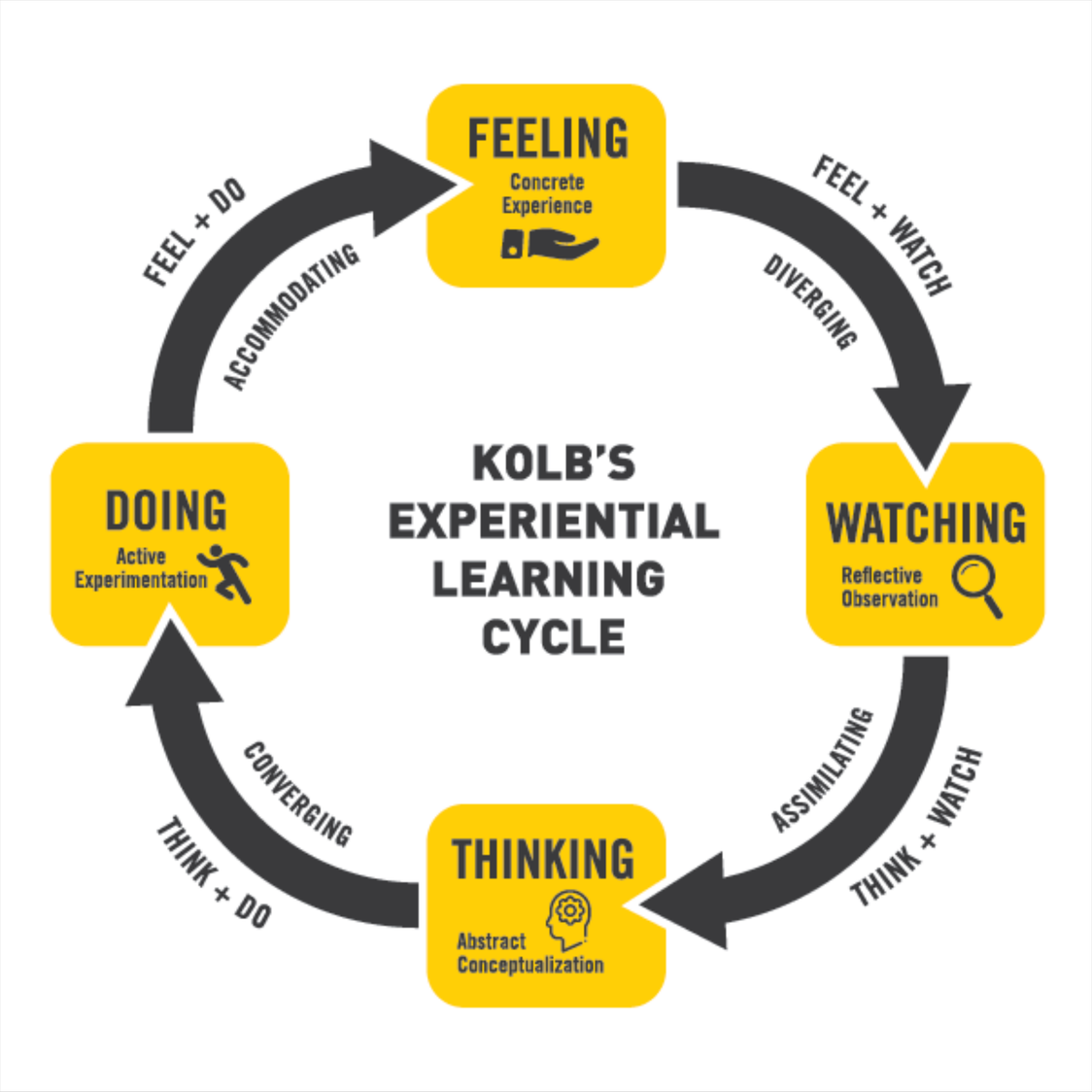

# Advanced Software Engineering Development Methods

SOFTENG 701 – Theme 2: Education in Software Engineering

Educational Theory

# Kolb's Experiential Learning Cycle



# Kolb’s Learning Styles

**Diverging** (CE/RO) - Information gatherers that prefer to watch rather than do. Broad perspectives, excel at brainstorming, collaborative activity and interpersonal skills.

**Assimilating** (AC/RO) - Logical approach to problems through explanation and structured information. More focused on data, ideas and concepts than people.

**Converging** (AC/AE) - Good at interpreting logical ideas and finding practical solutions to these. High technical proficiency though less focused on interpersonal skills.

**Accommodating** (CE/AE) - Hands-on learners that love to experiment. Use their interpersonal skills to learn from others then test this knowledge through experimentation

# Analogies!

Benefits

- Utilise previous knowledge to simplify concepts (Constructivist).
- Provide concrete examples for abstract learning.
- Easier avenues for peer teaching and learning.

Risks

- Increased cognitive load translating between analogy and literal concepts.
- Divergence from the learners' mental models.
- Unintended extrapolation of analogous material leading to misunderstandings.

How can we minimise these risks when using analogies?