

Transfer of Learning

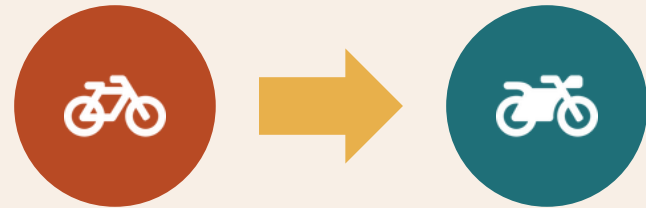
Unit III: Learning and Motivation

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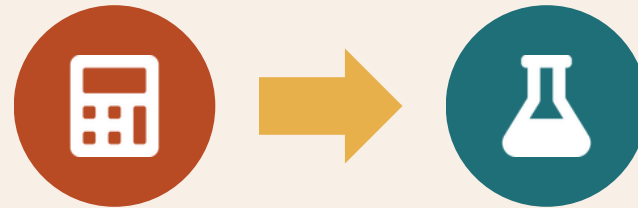


Introduction

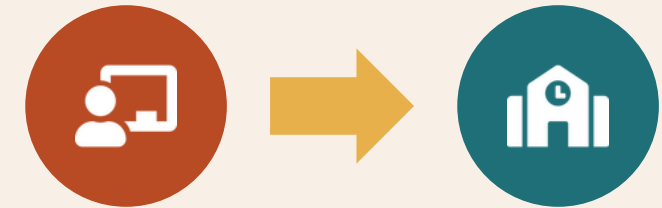
School learning is useful only when it can be used in new situations.
That carry-over is called transfer of learning.



Cycle → Bike
Balance carries over



Maths → Physics
Graphs and ratios help



**Micro-teaching →
Class**
Skills carry over



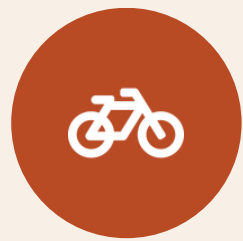
Today: meaning, types, theories and classroom use

Transfer is not simply remembering old knowledge. It means that earlier learning influences new learning or performance.



Meaning of Transfer of Learning

Transfer of learning is the influence of learning in one situation on learning or performance in another situation.



Earlier learning
Riding a cycle

carry-over



New learning
Riding a bike



Definitions of Transfer of Learning

1

Crow and Crow

The carry-over of habits of thinking, feeling or working, of knowledge or of skills from one learning area to another.

2

Alexander and Murphy

The process of using knowledge or skills acquired in one context in a new or varied context.

3

Guthrie and Powers

A process of extending and applying behaviour.



Nature and Characteristics



Carry-over of learning from one situation to another



Can be positive, negative or zero



Depends on similarity between situations



Not automatic: teachers must plan for it



Greater when learning is with understanding



Transfer is an important aim of education



Positive, Negative and Zero Transfer



Positive

Earlier learning improves new performance

Example

Violin → piano; cycle → bike



Negative

Earlier learning harms new performance

Example

Left-hand drive hinders right-hand drive

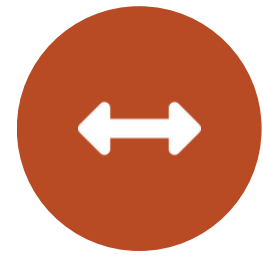


Zero

No effect, no transfer

Example

Bike → piano



Vertical and Horizontal Transfer



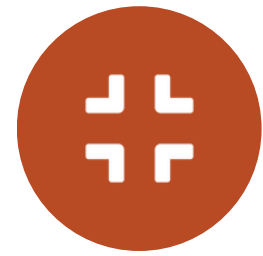
Vertical

- Lower-level learning helps higher-level skills
- Can be positive or negative
- One class helps the next higher class
- Childhood experience helps in adult life



Horizontal

- Knowledge in one subject helps in another subject
- **Example:** Gupta period history helps in understanding its literature and culture

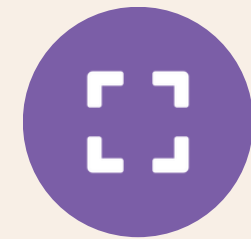


Near and Far Transfer



Near Transfer

- Between very similar contexts
- **Example:** driving a cycle, then a bike
- **Example:** school programming helps in a coding programme



Far Transfer

- Between contexts that seem alien to each other
- **Example:** geometry vectors help to visualise the barbell path in weightlifting



Teacher tip: far transfer is harder, so point out the link.



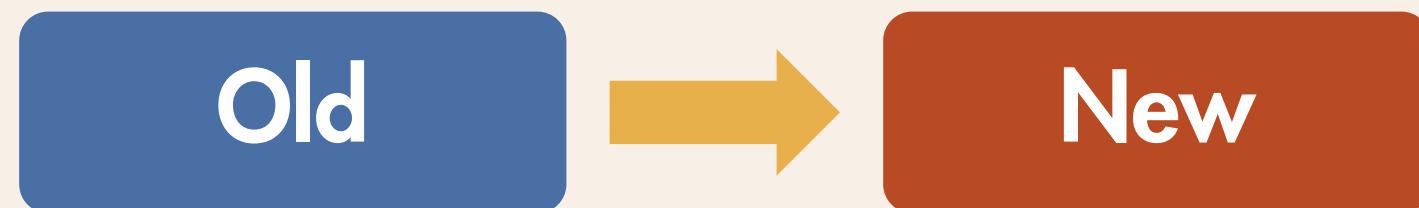
Proactive and Retroactive Transfer



Proactive Transfer

- Earlier learning influences what is being learned now
- **Example:** new phone or credit card number

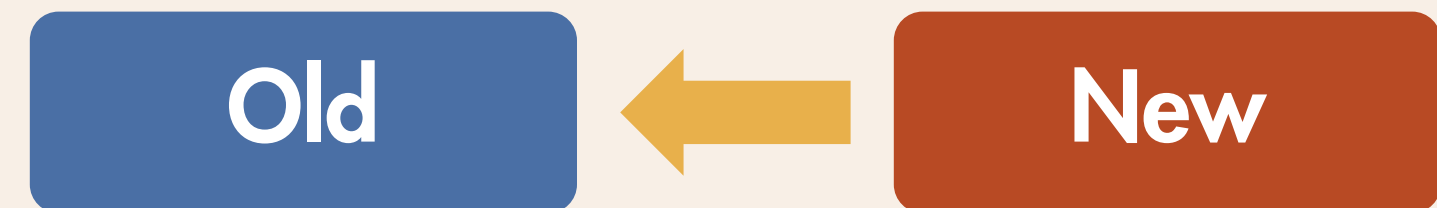
Old influences new



Retroactive Transfer

- Newly learned skill influences a previously learned skill

New influences old





Unilateral and Bilateral Transfer



Unilateral Transfer

- Training one limb helps a future activity
- **Example:** left-hand writing helps if the right hand is injured



Bilateral Transfer

- Training one limb transfers to the parallel limb
- **Example:** right-hand basketball shot, then left hand



Observed by: E. H. Weber; supported by Fechner



Important Theories of Transfer

1

Mental Discipline (Faculty Theory)

2

Identical Elements: E. L. Thorndike

3

Generalisation: Charles H. Judd

4

Transposition / Configuration / Gestalt Theory

5

Ideals: W. C. Bagley



Mental Discipline and Identical Elements



Mental Discipline

- Also called Faculty Theory
- Education is training or disciplining the mind
- **Today:** unpopular with most psychologists and educators



Identical Elements

- E. L. Thorndike: transfer is greatest when situations have identical elements
- More similarity, more transfer
- **Example:** cycle → bike is fast



Modern view: transfer needs understanding, not only drill.



Generalisation of Experience

1

Idea: learning task A builds a general principle

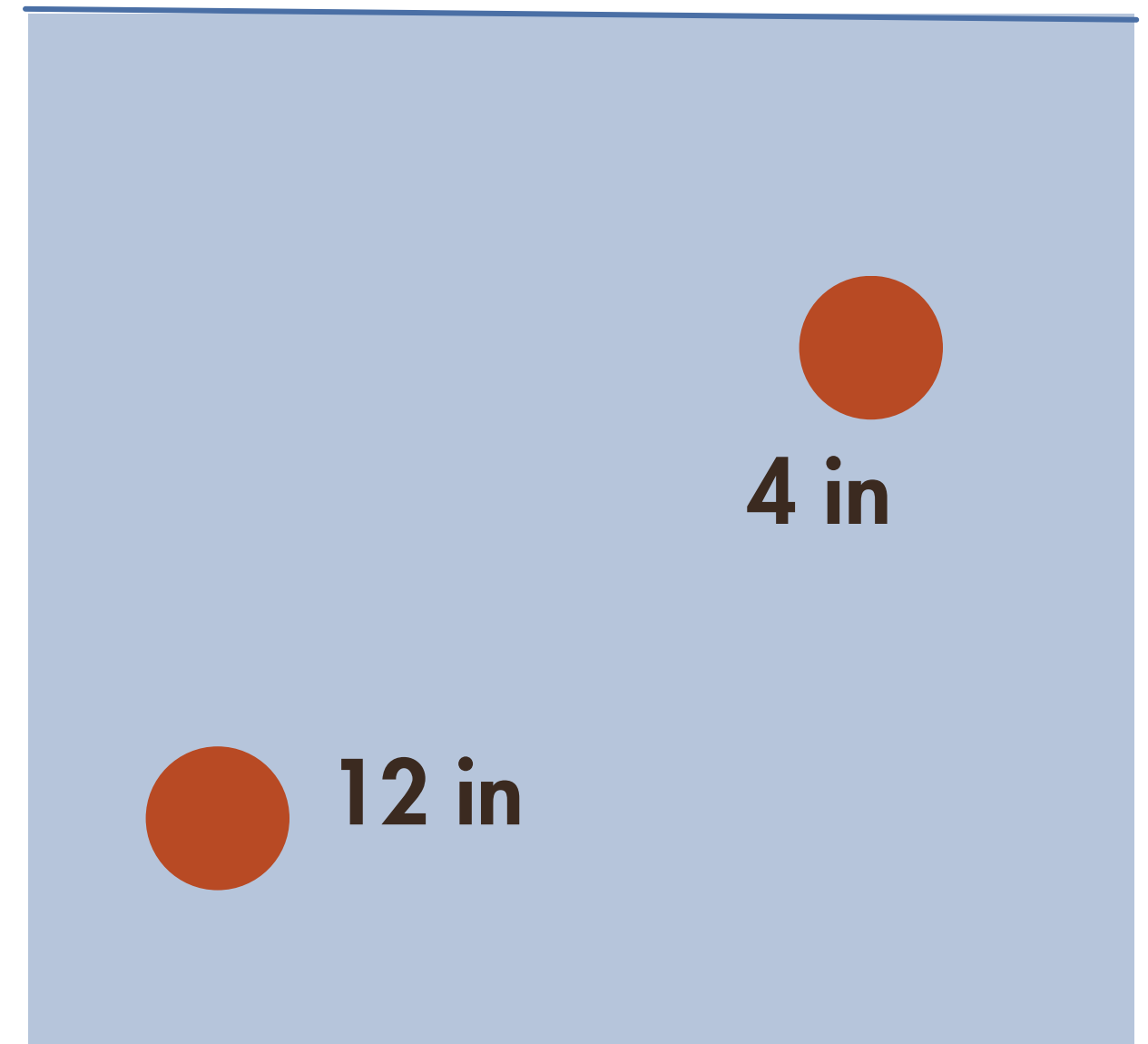
2

Transfer: the principle applies in part or fully to task B

3

Judd's experiment: boys who knew refraction adapted faster to a new water depth

Water target





Gestalt Theory and Theory of Ideals



Gestalt / Transposition

- Also called Configuration Theory
- Learning shifts directly only when situations have similarities
- Learner sees the pattern in the whole situation



Ideals: W. C. Bagley

- **Ideals are deeper than generalisation**
- Honesty, accuracy and hard work can transfer
- Teacher must stress them consciously



Promoting Transfer in the Classroom



Teach principles

Help learners
generalise rules



Show similarities

Link new topics to old
ones



Master basics

Strong base helps
higher classes



Vary examples

Use many situations
and examples



Avoid confusion

Point out differences
clearly



Real-life use

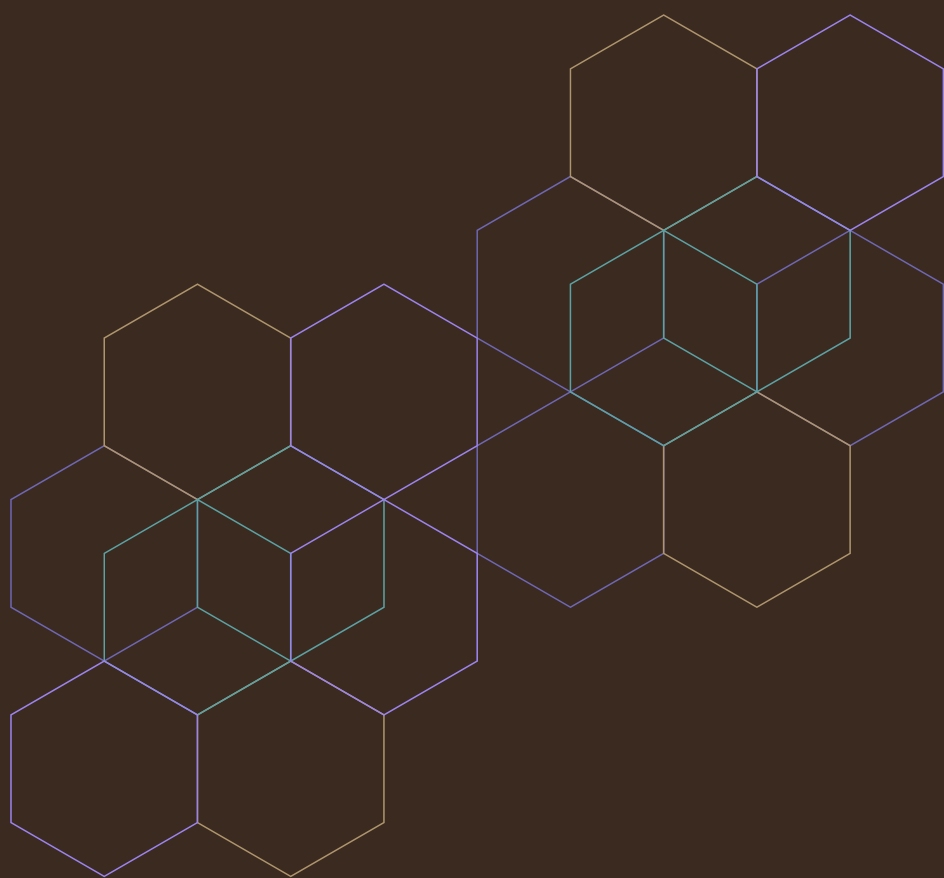
Practise in daily life

Conclusion

-  Transfer is the effect of earlier learning on new learning
-  It can be positive, negative or zero
-  Types: vertical, horizontal, near, far, proactive, bilateral
-  Theories: discipline, identical elements, generalisation, Gestalt, ideals
-  Teachers must plan for transfer: it is not automatic



Thank You



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