

Conceptualisation of motor skill transfer in water safety education: A scoping review

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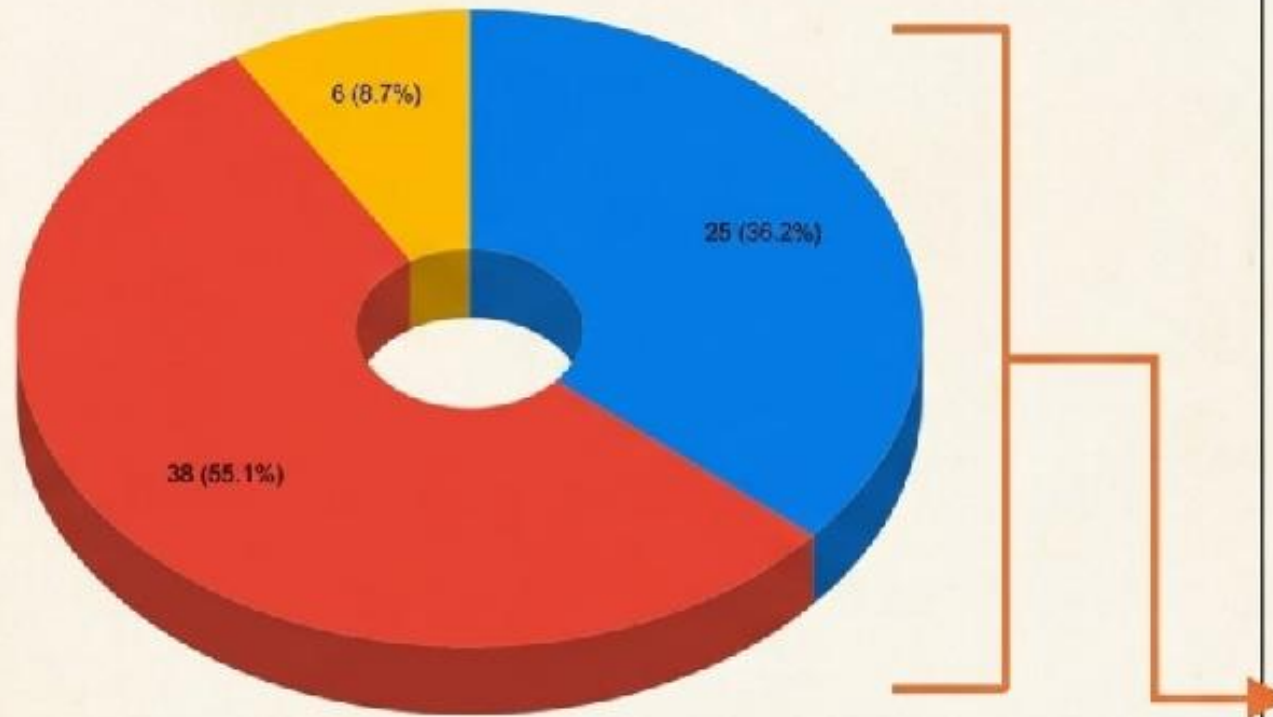
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We rely on skill transfer to save lives, but a scoping review reveals a fractured understanding of how it works.



● Review / theoretical / conceptual paper ● Experimental / observational study ● Qualitative study / survey

The Evidence Gap

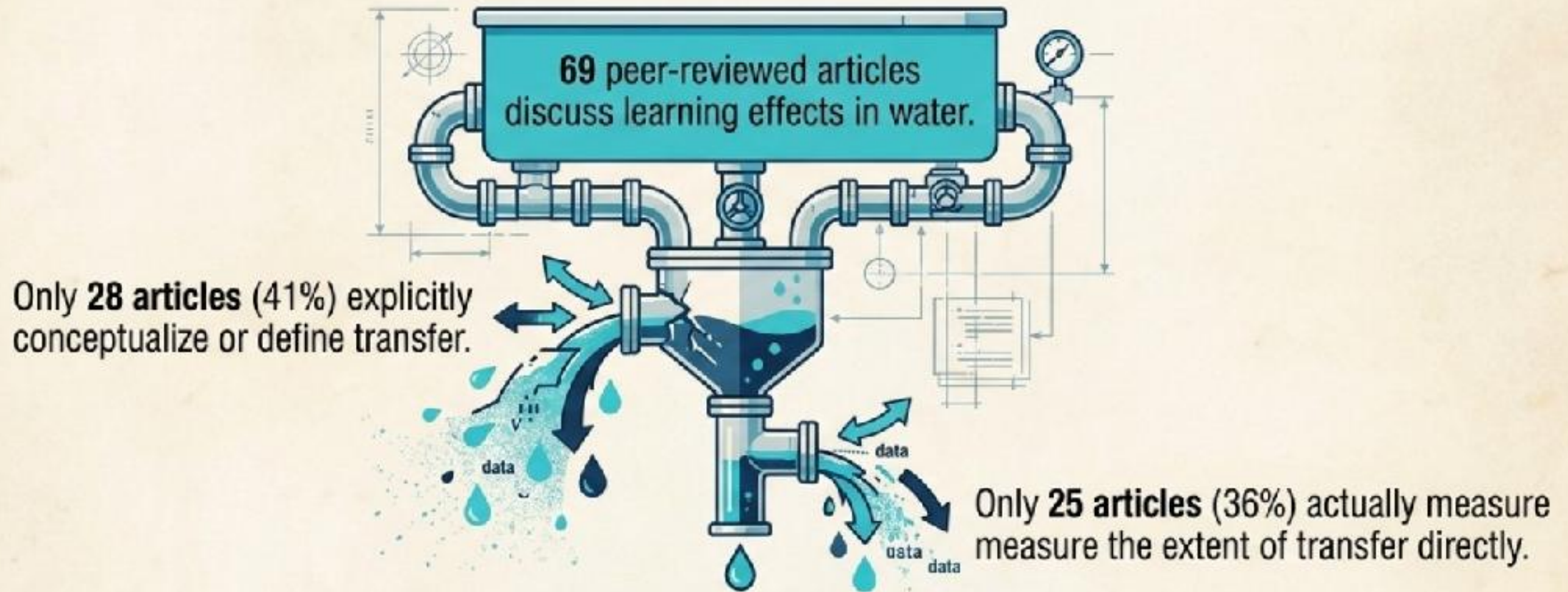
50 Years of Literature

The systematic scoping review identified peer-reviewed articles spanning from 1972 to 2024.

Urgent Recognition

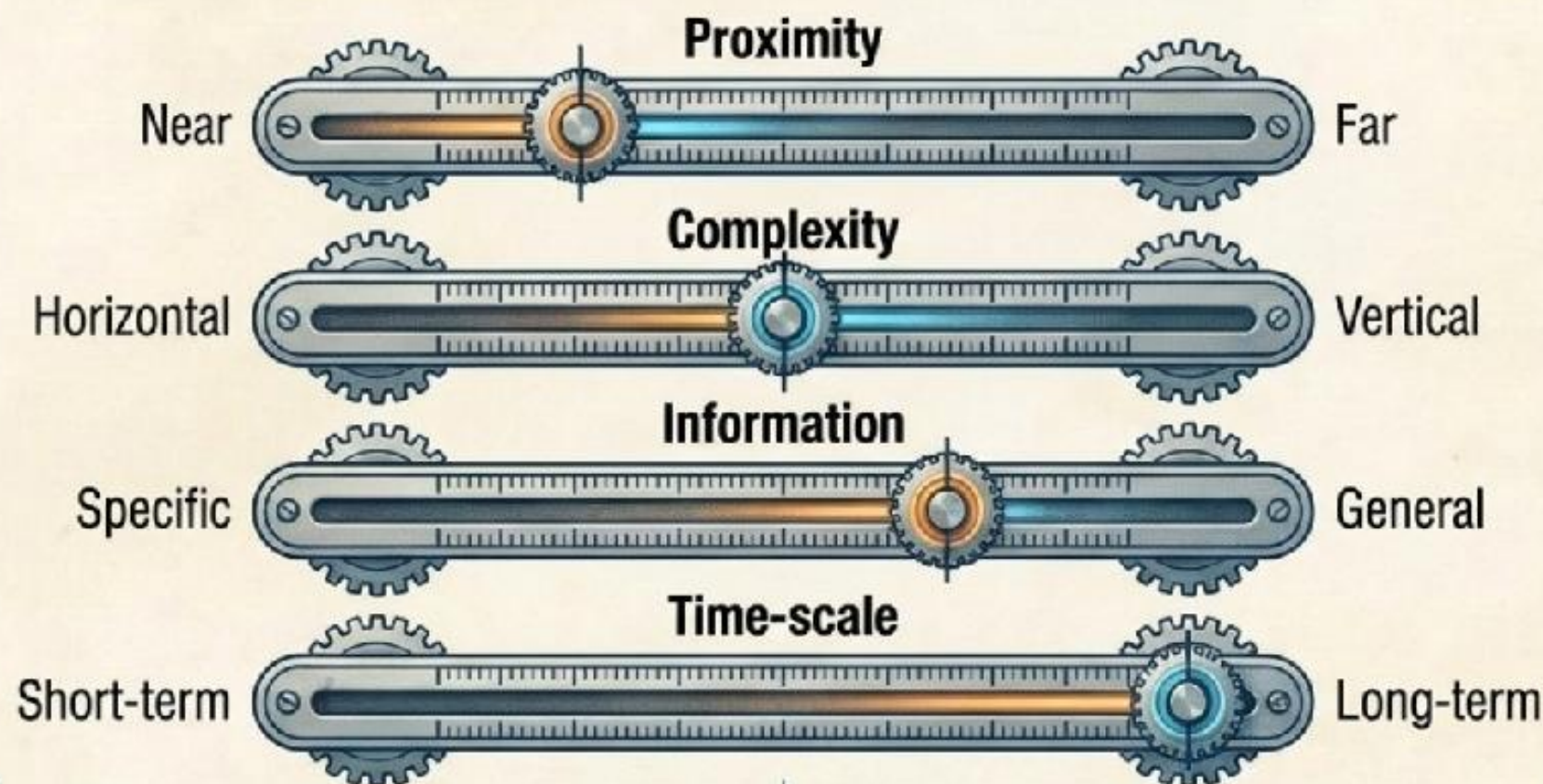
43% of this literature was published in just the last 5 years, signaling a critical, growing recognition of the transfer problem.

The attrition of scientific rigor leaves educators without a proven framework for curriculum design.



We talk about transfer constantly, but we rarely define what it is, and we almost never measure if it actually happened.

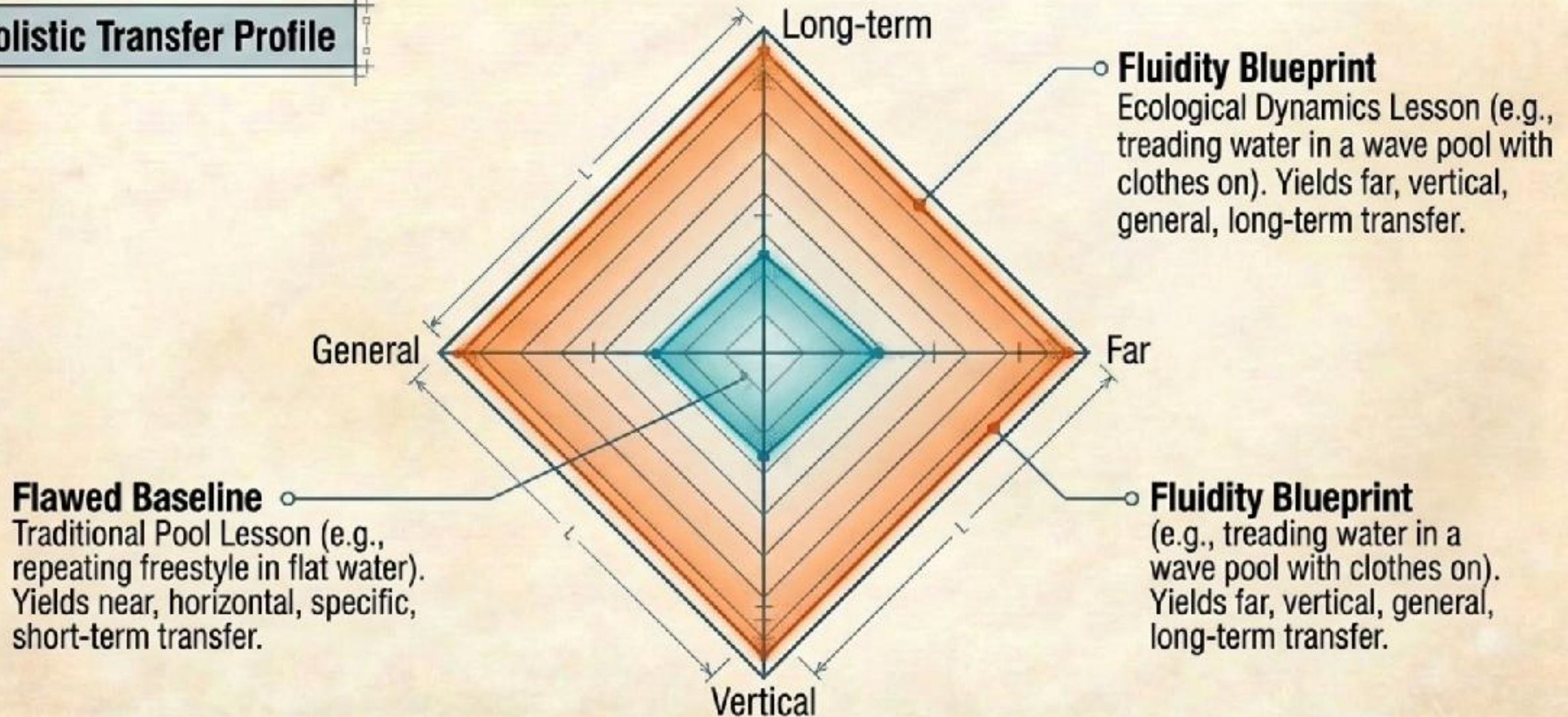
Transfer is not a binary switch; it operates on a continuous spectrum of similarity and complexity.



Drawing on Barnett & Ceci (2002), we must abandon extreme polarized categories. The extent of transfer exists along gradations. To design effective training, we must manipulate these four dials.

Designing effective curricula requires mapping individual lessons across all four dimensions simultaneously.

Holistic Transfer Profile



Blueprint for Researchers: Replace assumed learning effects with direct, rigorous measurement.



Mandate Direct Transfer Tests

Experimental designs must include transfer tests (e.g., testing pool-learned skills in an open-water scenario) to measure true adaptation.



Delineate Time-Scales

Stop conflating short-term adaptation with learning. Studies must include immediate post-practice tests, medium-term retention, and multi-year longitudinal tracking.



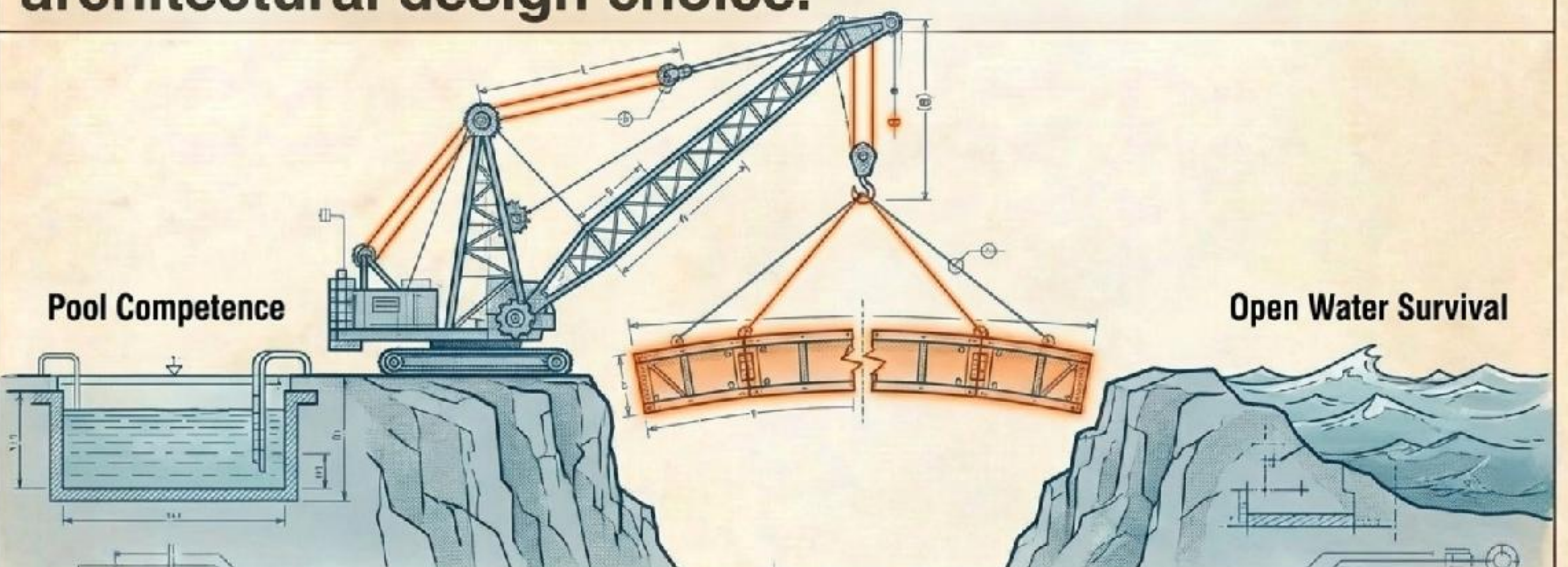
Adopt a Unified Definition

Utilize the new working definition to ensure cross-disciplinary collaboration between motor learning theorists and public health officials.

Skill transfer is never an accident; it is a conscious, architectural design choice.

Pool Competence

Open Water Survival



Educators cannot just teach a stroke and hope it transfers to survival. They must **intentionally manipulate environmental, task, and personal constraints** to actively push learners across the continuum—from specific, near-transfer pool drills to general, far-transfer open-water resilience.

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