



ARC Papers | Paper 002

Why Expertise Isn't Enough

Distinguishing Expertise from Professional Intelligence

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Abstract

Expertise has long been recognised as a defining characteristic of effective professional practice. Educational research demonstrates that expertise develops through the accumulation of knowledge, experience and deliberate practice, enabling educators to recognise patterns, solve problems efficiently and respond with increasing sophistication.[1] Yet expertise alone does not fully explain how equally knowledgeable educators continue to adapt their professional judgement as evidence, curriculum and learner needs evolve.

This paper argues that **Professional Intelligence** provides an additional explanatory construct. Whereas expertise describes the development of professional knowledge, Professional Intelligence describes the continual processing of knowledge, evidence and context into professional judgement.



Why Expertise Isn't Enough

Paper 001 introduced Professional Intelligence as the processing capacity through which educators synthesise curriculum, pedagogy, assessment, evidence and contextual knowledge into professional judgement. The next question is inevitable: if education already understands expertise, why do we need Professional Intelligence?

Professional Intelligence does not replace expertise. It depends upon it.

Across education and other professions, expertise explains how professionals develop increasingly sophisticated knowledge through study, deliberate practice and experience.[1] Berliner described expertise as a developmental progression in which professional performance becomes increasingly efficient, intuitive and flexible.[2] Hatano and Inagaki later distinguished between routine expertise and adaptive expertise, arguing that genuine expertise is characterised not only by efficiency but by the capacity to respond intelligently to unfamiliar situations.[3]

Collectively, this work explains how expertise develops. It explains why experienced educators recognise patterns more readily than novices, anticipate misconceptions before they emerge and retrieve relevant knowledge with increasing efficiency.

What it explains far less explicitly is the professional capability through which educators continually examine, challenge and reconstruct that knowledge as evidence, curriculum and context evolve.

Expertise provides knowledge. It provides experience. It provides pattern recognition. What it does not guarantee is that established thinking will continue to evolve.

Implementation science has long recognised the phenomenon of lethal mutations, the gradual alteration of evidence-informed innovations until their defining characteristics are diminished or lost through implementation.[4]

Professional autonomy inevitably involves adaptation. Implementation research recognises that thoughtful adaptation is both necessary and desirable when responding to local contexts. It also demonstrates that adaptations can gradually compromise the essential features of an evidence-informed innovation, a phenomenon described as a lethal mutation. The challenge for educators is not whether to adapt practice, but how to distinguish adaptations that strengthen implementation from those that unintentionally diminish it.[4]

Adaptive expertise explains an educator's capacity to respond flexibly to unfamiliar situations. Professional Intelligence complements this work by explaining the continual professional processing through which knowledge, evidence and context are synthesised into professional judgement.[3][5]



ARC proposes that Professional Intelligence provides the disciplined professional processing through which educators distinguish principled adaptation from adaptation that gradually weakens practice. [5]

Professional Intelligence Sustains Expertise

Professional learning has traditionally sought to increase educators' knowledge, refine instructional practice and strengthen professional expertise. Professional Intelligence suggests an additional purpose: strengthening the quality of professional processing through which that knowledge is interpreted, challenged and transformed into professional judgement.

Expertise answers an essential question: *What does the educator know?*

Professional Intelligence answers a different question: *How does the educator think with what they know?*

Schools require both, if professional judgement is to remain evidence-informed, adaptive and continually improving.

Paper 003 examines the cognitive work of teaching and argues that if students experience cognitive load while learning, educators also experience cognitive load while planning, teaching and reflecting.



References

[1] Supporting Literature

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[2] Supporting Literature

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[3] Supporting Literature

Hatano, G., & Inagaki, K. (1986). Two Courses of Expertise. In H. Stevenson, H. Azuma, & K. Hakuta (Eds.), *Child Development and Education in Japan* (pp. 262–272). W. H. Freeman.

[4] Supporting Literature

Brown, A. L., & Campione, J. C. (1996). Psychological Theory and the Design of Innovative Learning Environments. In L. Schauble & R. Glaser (Eds.), *Innovations in Learning: New Environments for Education* (pp. 289–325). Lawrence Erlbaum Associates. (Foundational discussion of "lethal mutations" in educational innovation.)

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[5] ARC Framework

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