AI Capability for Doctoral Supervisors

A practical briefing aligned to the CloudPedagogy AI Capability Framework (2026 Edition)

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1. What this brief is for

This brief is for **Doctoral Supervisors** responsible for guiding doctoral researchers through extended, original research in contexts where artificial intelligence increasingly supports reading, analysis, writing, planning, and reflection.

It is intended for supervisors who:

- oversee research design and intellectual development

- support scholarly writing and argumentation

- advise on ethics, integrity, and authorship

- prepare doctoral researchers for independent academic or professional careers

This is not guidance on policing AI use or prescribing tools.
 It is a **capability briefing** to support supervisory judgement, intellectual integrity, and developmental mentoring when AI becomes part of doctoral research practice.

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2. Why AI capability matters in doctoral supervision

Doctoral study is fundamentally about:

- developing independent scholarly judgement

- producing original, defensible knowledge

- learning how to navigate uncertainty and complexity

AI tools can support aspects of this journey, but they can also:

- obscure where thinking is happening

- accelerate writing ahead of conceptual clarity

- create uncertainty about authorship and contribution

- distort supervision conversations if unspoken

AI capability enables supervisors to **integrate AI thoughtfully into doctoral development**, rather than treating it as a threat or ignoring its influence.

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3. Common risks and blind spots for doctoral supervisors

Across disciplines, recurring challenges emerge:

- **Invisible AI use**: doctoral researchers using AI without discussing it.

- **Premature polish**: fluent writing masking conceptual gaps.

- **Dependency risk**: over-reliance on AI for framing or synthesis.

- **Authorship ambiguity**: unclear boundaries of intellectual contribution.

- **Ethics lag**: AI use not reflected in ethics approvals or methods sections.

- **Inconsistent expectations**: different supervisors offering conflicting advice.

These risks arise when AI is outside the supervisory conversation.

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4. Applying the six domains of AI capability in doctoral supervision

The AI Capability Framework provides a shared language for navigating AI within doctoral education.

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1. AI Awareness & Orientation

Supervisors need a realistic understanding of how AI affects doctoral work.

This includes:

- recognising how AI can influence reading, synthesis, and writing

- understanding limitations in AI-generated interpretation

- avoiding assumptions that polished text reflects deep understanding

This domain supports **diagnostic supervision**, not technical evaluation.

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2. Human–AI Co-Agency

Doctoral research must remain intellectually owned by the candidate.

AI capability here involves:

- reinforcing that judgement, argument, and interpretation are human responsibilities

- helping candidates articulate how AI supports, rather than replaces, thinking

- modelling transparent scholarly practice

Clear co-agency protects originality and academic integrity.

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3. Applied Practice & Innovation

AI can support doctoral development when used deliberately.

This domain supports:

- exploratory use of AI to test ideas or perspectives

- reflective comparison between AI outputs and candidate reasoning

- using AI as a prompt for discussion rather than a solution

Innovation is valuable when it strengthens learning, not shortcuts it.

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4. Ethics, Equity & Impact

Doctoral researchers operate within ethical frameworks.

AI capability in this domain includes:

- ensuring AI use aligns with ethics approvals and disciplinary norms

- discussing bias, representation, and data sensitivity

- recognising power dynamics and vulnerability in doctoral contexts

Ethical supervision requires proactive conversation, not assumption.

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5. Decision-Making & Governance

Doctoral work is subject to formal milestones and examination.

AI capability here involves:

- preparing candidates to explain and justify AI use

- ensuring transparency in methods and acknowledgements

- supporting defensible practice in progression reviews and viva contexts

Good governance supports candidate confidence and examiner trust.

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6. Reflection, Learning & Renewal

Doctoral education is developmental over time.

Capability is strengthened when supervisors:

- revisit AI expectations as projects evolve

- reflect on how AI shapes scholarly identity

- adapt supervisory approaches deliberately

This domain supports intellectual independence rather than dependence.

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5. Practical actions for doctoral supervisors

The following actions support AI-aware doctoral supervision:

- **Make AI use discussable**
  Normalise conversation about how AI is being used.

- **Focus on thinking, not polish**
  Probe reasoning, decisions, and interpretations explicitly.

- **Clarify boundaries early**
  Discuss acceptable and unacceptable uses at key stages.

- **Align with ethics and discipline norms**
  Ensure AI use is reflected appropriately in approvals and methods.

- **Model transparency**
  Demonstrate how to describe AI use responsibly in scholarly work.

- **Revisit expectations regularly**
  Treat AI capability as evolving, not fixed.

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6. Signals of mature AI capability in doctoral supervision

Doctoral environments with strong AI capability typically show:

- open, reflective dialogue about AI use

- clear ownership of intellectual contribution

- candidates confident in explaining their methods

- reduced anxiety about integrity or authorship

- alignment between supervision, ethics, and examination

- graduates prepared for AI-rich research environments

These signals reflect **scholarly maturity**, not restriction.

7. How this brief fits within the AI Capability Framework

This brief applies the **AI Capability Framework (2026 Edition)** to doctoral supervision.

To deepen this work, supervisors may explore:

- the full AI Capability Framework (PDF)

- Practice Guides focused on research and high-stakes contexts

- the Application Handbook for reflective supervision pathways

- facilitated discussions within doctoral schools

The Framework provides structure.
 Doctoral Supervisors provide **intellectual stewardship and mentorship**.

About CloudPedagogy

CloudPedagogy develops practical, ethical, and future-ready AI capability across education, research, and public service.

This brief is part of the **AI Capability Briefs** series, supporting role-specific judgement and decision-making using the **CloudPedagogy AI Capability Framework (2026 Edition)**.

Framework: https://www.cloudpedagogy.com/pages/ai-capability-framework
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