The Open PMC Protocol — Reference Specification v1.0

The Open PMC Protocol

1. What this document is

This is the reference specification for the Open PMC Protocol — an open educational design standard that any educator, community, school, or government can implement freely, in their own vocabulary, under Creative Commons Attribution 4.0 licensing.

PMC stands for Personal Mentoring Cell — the basic unit of learning the protocol defines. The protocol specifies the structural requirements every Personal Mentoring Cell must meet. It does not specify vocabulary, worldview, content, or curriculum. Those are the implementing community's own decisions.

The protocol's design principle — "Learning begins with a question and a project" — anchors the learning cycle. Every Personal Mentoring Cell begins with a genuine question and ends with a real, presented project.

This document is the authoritative specification. The Substack publication at drleejin.substack.com and the implementation resources at peconaqri.org are supplementary. If anything in those supplementary resources conflicts with this specification, this document takes precedence.

The Open PMC Protocol is a design proposal, not a proven system with operational data at scale. It is shared openly so that communities can begin building the evidence that validates, refines, or improves it. Peconaqri — the reference implementation described at peconaqri.org — is one implementation of this protocol. It is not the only possible implementation, and communities are not required to use Peconaqri's vocabulary or resources to implement the protocol.

Neutral language note: The open protocol terms used in this specification — Personal Mentoring Cell, Quest Seed, Bootcamp, Intentionality Phase, Whole-Life Success Profile, Learning Framework Slot, Organisation Brain — are descriptive names for the protocol's structural elements. Tier 1 operators implementing in their own vocabulary may use any equivalent terms. Use of these open protocol terms does not imply endorsement, certification, or affiliation with Peconaq Inc.

2. The protocol in one paragraph

The Open PMC Protocol proposes the Personal Mentoring Cell as an alternative basic unit of education for the AI age — capable of supplementing, hybridising with, or eventually replacing the industrial-age classroom where context, law, and community readiness permit. A Personal Mentoring Cell is a small, mentor-led group of four to twelve learners, structured around a repeating learning cycle that begins with a genuine question and ends with a real presentation. The protocol requires every cell to have a stable mentor relationship, a structured Intentionality Phase before each cycle, a multi-dimensional Whole-Life Success Profile that extends beyond academic grades, an explicit vocabulary for the distinction between unconscious drift and intentional living, a two-function AI toolkit (one learner-facing, one cell-facing), cell-owned data storage, and a voluntary pathway for contributing anonymised pattern-level insights to the Open PMC Commons. Everything else — vocabulary, worldview, content, curriculum, the specific AI tools — is the community's own decision.

The protocol explicitly accommodates high-density institutional student loads. A teacher currently managing 24–36 students can restructure into two cells — for example, two cells of 12–18 — using the Internal School Pivot: while one cell is in a mentor-led session, the other works on self-directed learning in a designated on-campus space, then the groups swap. This requires zero net change to existing staff headcount for the pilot phase. Full adoption at scale is addressed separately in the implementation guidance at drleejin.substack.com.

3. Seven structural pillars

These seven requirements define a Personal Mentoring Cell. An implementation that meets all seven is a PMC cell regardless of what vocabulary it uses. An implementation that omits any one of them is not a PMC cell — it may be a valuable educational programme, but it is not implementing the Open PMC Protocol.

A consistent group of four to twelve learners meeting regularly with one consistent mentor. The relationship is the foundation. A rotating roster of different adults does not constitute a cell.

Before every learning cycle, every learner consciously chooses active engagement over passive reception. This is a structural requirement, not an optional warm-up. In an age where AI-optimised platforms capture attention and shape identity before any awareness arises, the Intentionality Phase is the structural counter-measure. The form it takes is the community's choice — a moment of silent intention-setting, a recitation, a spoken commitment, a written declaration. The requirement is that it exists and is genuine.

Each learning cycle must begin with a full Intentionality Phase. Each session within the cycle should begin with a brief intentionality check-in — a shorter renewal of the conscious engagement commitment that opened the cycle.

Every cell defines success across multiple dimensions of human flourishing — covering at minimum the learner's relationship to self, to community, and to the natural world. Examination grades alone are structurally insufficient. The specific dimensions and their names are the community's choice. A government school might draw on student wellbeing research. A faith community draws on their tradition's account of the flourishing life. The profile must be explicit, known to all learners, and referenced in reflection.

Every cell must have an explicit vocabulary for naming the distinction between unconscious drift and intentional, aware living. The protocol leaves this slot entirely open. Peconaqri fills it with Game of Life, NPC/PC, and Cube of Life language. A Muslim cell fills it with ghafla and taqw■ . A Buddhist cell uses avidy■ and bodhi-citta . A government school uses System 1 and System 2. The structural requirement is that the slot be filled with a vocabulary the community genuinely holds. The content is entirely the community's own.

Every cell has at minimum two AI agent functions: one learner-facing (supporting academic learning and Quest navigation) and one cell-facing (the Organisation Brain, aggregating learning patterns and generating insights for the mentor). A single well-configured AI system serving both functions meets the minimum. "Well-configured" means the system has separate context or instructions for each function — learner support operates differently from cell pattern analysis, even if it is the same AI platform. See Section 7 for the recommended four-agent architecture.

Each cell owns its canonical data. The AI model is the interface, not the record of truth. All authoritative records live in cell-owned storage — not in the platform that provides the AI interface. The Organisation Brain operates on structured summaries in cell-owned documents. The learner's personal life reflection records are private to the learner and never aggregated. See Section 8 for minimum governance rules.

Each cell is invited — never required — to distil anonymised, pattern-level insights from its Organisation Brain and contribute them to the Open PMC Commons at peconaq.org. Cells share

abstractions, never raw data. The cell that contributes grows the commons for everyone; the cell that does not contribute still benefits from what others have shared. Contribution formats, licensing, and curation standards are governed by the Open PMC Commons governance documentation, which will be published at peconaq.org as the Commons moves from pilot to active contribution.

4. The learning cycle

Every Personal Mentoring Cell runs its learning through one repeating cycle. The cycle always begins with a genuine question and always ends with a real presentation to a real audience. The vocabulary for each stage is the community's own — the structure is the protocol's.

Intentionality Phase: The learner consciously chooses active engagement. This is Pillar 2 in operation — the structural counter-measure to algorithmic capture that precedes every learning activity.

Quest Seed: The learner identifies a genuine question they want to pursue. A genuine question is one the learner does not already know the answer to and is genuinely curious about — not a question assigned by the mentor or required by the curriculum. The mentor's role at this stage is to help the learner develop a vague interest into a specific, researchable question.

Bootcamp: The learner acquires the foundational knowledge and skills needed to pursue the Quest. Where national curriculum requirements exist, Bootcamp content covers these requirements — placing them inside a framework of meaning rather than treating them as ends in themselves. Academic competency is fuel for genuine inquiry, not the destination.

The Quest: The learner does the active work of inquiry, creation, building, or experimentation. The mentor circulates, observes, and asks questions that produce genuine thinking. The Quest Journal records significant findings and decisions.

Presentation: The learner presents their Quest to the cell group — what they investigated, what they found, what failed, what they would do differently. This is public proof of genuine learning, not performance of a grade.

Reflection: The learner reflects on three dimensions: what was learned about the subject matter; what was learned about the learner's own thinking habits and process; and what new questions have emerged that could seed the next Quest. The Reflection closes the cycle and seeds the next Quest Seed. In the recommended four-agent architecture, the PLN captures the interior personal dimension of this reflection — private to the learner.

5. Four variable dimensions

The following four dimensions are set by each implementing community. They determine how the protocol operates in a specific context without changing the protocol's seven structural requirements.

6. The cell hierarchy

7. The AI toolkit layer

Protocol minimum

One learner-facing AI function and one cell-facing Organisation Brain function. A single well-configured AI assistant (Gemini, ChatGPT, or equivalent) serving both functions meets this minimum, provided the mentor configures the system with distinct system instructions for the learner-facing function and the cell-facing Organisation Brain function — each with different roles, access scopes, and output formats.

Child safety requirement: Learner-facing AI tools must be used under age-appropriate platform terms, with guardian consent where required by local law, and with mentor oversight appropriate to the learner's age and context. The cell is responsible for verifying that any AI platform used with minors complies with applicable child data protection requirements before the first session.

Recommended four-agent architecture (Peconaqri reference design)

PAT — Personal Academic Tutor: Supports academic learning and curriculum content. Session summaries stored in the learner's Learning Progress document.

PQT — Personal Quest Tutor: Supports Quest navigation across all phases. Session summaries stored in the Quest Journal.

PLN — Personal Life Navigator: Supports personal reflection and life direction. Session summaries stored in the Life Reflection record. Never accessed by the Organisation Brain. Private to the learner.

PLA — PMC Learning Agent (Organisation Brain): Cell-facing. Reads Learning Progress documents and Quest Journals across all learners. Generates pattern-level insights for the mentor. Does not continuously monitor — processes on mentor request only.

End-of-session documentation

After each AI session, a structured summary is saved to the appropriate cell-owned document. The recommended approach is a standardised end-of-session command (e.g., /archive) that prompts the AI to compile the required summary block, which the learner copy-pastes into the appropriate document. This reduces data entry friction and maintains documentation discipline without requiring significant time investment.

8. Data sovereignty architecture — minimum governance rules

Every cell must establish the following rules before the first session involving learners.

Learner access: Every learner can see and download their own Learning Progress document and Quest Journal at any time.

Parent/guardian visibility: Parents and guardians know what records are kept, why, and how they are stored. A data transparency statement is shared with all families before the cell begins.

PLN privacy is absolute: Life Reflection records are private to the learner. The mentor does not read them. The Organisation Brain does not access them. The learner may voluntarily share a specific entry with the mentor, but this is always the learner's choice — never the default or required behaviour.

Raw data never flows upward: Only distilled, anonymised, pattern-level insights move from Cell to Microschool to Campus to Commons. Never raw documents, never identifiable records.

Retention, deletion, and portability: Each cell defines how long records are kept, how a learner can request deletion, and how a learner who leaves the cell can take their records. Portability is the

default — records belong to the learner. The learner can export all their Learning Progress documents and Quest Journals in a standard format (PDF, Markdown, or equivalent) at any time. The cell is responsible for facilitating this on request.

AI model independence: Because all authoritative records live in cell-owned storage, the Organisation Brain is independent of any specific AI model or provider. If the cell changes AI platforms, the accumulated institutional knowledge remains intact in cell-owned documents.

Local data protection compliance: All data handling must comply with applicable child data protection law. Consult local legal counsel or your institution's data protection officer before implementation.

9. The three-tier ecosystem

10. Licensing and IP

11. Version history and change policy

This is Version 1.0 of the Open PMC Protocol Reference Specification, published June 2026. Future versions will be numbered v1.1, v1.2, v2.0 and published at peconaq.org. Minor versions (v1.x) clarify or extend the protocol without changing compliance requirements. Major versions (v2.0+) may change compliance requirements. Existing implementations may continue to identify the specification version they follow. The current version is always the definitive version at peconaq.org.

12. Implementation resources

Protocol specification: This document and updates at peconaq.org

Peconaqri implementation resources (Tier 2, CC BY-SA 4.0): Game of Life, NPC/PC, Cube of Life, Hero-in-Training educational materials at peconaqri.org

Cell Setup Guide (AI configuration, Google Drive setup, Organisation Brain workflow): peconaqri.org · Under development · Expected Q3 2026. The Cell Setup Guide provides the recommended summary block format for each AI agent type and step-by-step configuration instructions for Gemini, ChatGPT, and equivalent platforms.

Companion faith implementation guides (Buddhist, Islamic, Christian, Hindu, Jewish/Sikh/Secular): drleejin.substack.com and peconaqri.org. Note: religious and philosophical vocabulary examples in companion guides are illustrative starting points. Each community should define appropriate vocabulary through its own qualified tradition-bearers and educators.

Peconaqri-affiliated centre directory and Tier 3 affiliation: peconaqri.com

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