



TEACHER CAPABILITY | 2026 PRACTITIONER EDITION

AI Teacher Development Playbook

A progression from AI awareness to safe, evidence-led classroom practice and institutional learning.

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For ministries, school systems, teacher educators, development partners and school leaders investing in teacher AI capability.

FIELD-TESTED THINKING | PRACTITIONER TEMPLATES | EVIDENCE ANCHORS

What this manual helps you decide

Move from idea to explicit decisions, owners, evidence and next actions.

1	Define competent use as judgement, not attendance	A workshop is an input. Teacher capability appears in planning, facilitation, verification, adaptation and accountability.
2	Start with bounded problems and visible value	Teachers need a disciplined way to decide whether AI adds value, adds risk or merely adds novelty.
3	Organise development around rehearsal and coaching	Teachers need repeated cycles of practice, observation, feedback and adaptation in their own subjects.
4	Protect learners without removing meaningful participation	Responsible AI education must preserve child rights, authorship, judgement and routes for support.
5	Scale verified capability, not platform adoption	System leaders need evidence that AI practice improves education and remains governable.
6	90-day application	Use a 90-day professional learning cycle to diagnose, rehearse, apply, coach and institutionalise responsible practice.

Use the manual as a decision cycle

1 OBSERVE	2 DECIDE	3 ASSIGN	4 REVIEW
Start with the ordinary operating condition, not the launch-day exception.	Record the choice, the alternatives rejected and the assumption carrying the most risk.	Name one accountable owner, the supporting actors and the evidence they must produce.	Set a date and define what evidence will trigger continuation, repair, redesign or stop.

A completed template is not evidence of success. Pair every decision with an observable artefact, a named owner and a scheduled review.

Define competent use as judgement, not attendance

A workshop is an input. Teacher capability appears in planning, facilitation, verification, adaptation and accountability.

AI competence combines human-centred purpose, ethical judgement, technical understanding, pedagogy and professional learning. Tool fluency alone is incomplete.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Acquire	Explain core AI concepts, limitations, data implications and appropriate educational boundaries.	Scenario response and concept check
Deepen	Select bounded uses, design verification, protect learner agency and adapt lessons from evidence.	Observed lesson and annotated plan
Create	Lead peer learning, evaluate tools, redesign practice and contribute to institutional policy.	Peer moderation and improvement portfolio
Demonstrate	Require authentic tasks under realistic constraints rather than self-reported confidence.	Performance rubric and assessor notes

Decision questions

1. What must the teacher decide that the tool cannot decide?
2. Which capability is being assessed at each progression level?
3. What evidence distinguishes confident talk from competent practice?
4. How will professional learning continue after the initial course?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
Competencies, performance tasks and progression standards are explicit.	Success is defined by completion certificates, prompt lists or platform logins.

Field application

Give teachers a flawed AI-supported lesson and ask them to diagnose pedagogical, factual, privacy and inclusion risks. Use the responses as the baseline.

Start with bounded problems and visible value

Teachers need a disciplined way to decide whether AI adds value, adds risk or merely adds novelty.

Use AI only where the educational purpose is clear, human accountability is preserved and output can be verified at reasonable cost.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Classify	Separate planning, explanation, practice, feedback, assessment and administrative uses because their risks differ.	Use-case register with risk class
Bound	Define permitted data, teacher review, learner role, disclosure and fallback for each use.	One-page use protocol
Compare	Test the AI-supported workflow against a credible non-AI alternative.	Time, quality, access and risk comparison
Verify	Embed source checks, worked solutions, counterexamples, bias review and teacher judgement.	Verification record attached to output

Decision questions

1. What learning problem exists before AI enters the design?
2. What is the smallest responsible use that could address it?
3. What new failure mode does the tool create?
4. Can the lesson continue if the service is unavailable?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
The use case improves a defined task and has proportionate controls.	The tool is the objective, verification cost exceeds value or sensitive data is unnecessary.

Field application

Run the same planning task with AI, an approved conventional resource and teacher expertise. Compare quality, time, omissions and hidden costs.

Organise development around rehearsal and coaching

Teachers need repeated cycles of practice, observation, feedback and adaptation in their own subjects.

One-off training creates exposure. Capability grows through bounded application, evidence review, peer calibration and protected time to improve.		
DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Model	Demonstrate both productive use and responsible refusal, including visible verification.	Facilitator think-aloud and annotated example
Rehearse	Teachers complete authentic subject tasks, encounter failure and explain their decisions.	Task artefact, reflection and rubric
Apply	Each teacher runs a small classroom use with agreed safeguards and a fallback.	Lesson observation and learner evidence
Coach	Review output quality, learner agency, workload, inclusion and next adaptation.	Coaching record and revised plan

Decision questions

1. How many practice cycles occur before independent classroom use?
2. Who observes and gives subject-specific feedback?
3. What happens when teachers discover a policy or safeguarding concern?
4. How are strong adaptations captured and shared?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
Teachers complete demonstrated practice and receive feedback in context.	Training ends with inspiration, unmoderated experimentation or unsupported classroom use.

Field application

Schedule a lesson rehearsal where connectivity fails and an AI output contains a plausible error. Assess whether the teacher preserves learning and explains the decision.

Protect learners without removing meaningful participation

Responsible AI education must preserve child rights, authorship, judgement and routes for support.

Safety is an operating practice: minimise data, supervise appropriately, disclose AI involvement, preserve human review and respond to incidents.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Data minimisation	Use the least personal, confidential or identifying information necessary for the task.	Approved data classification and prompt examples
Age-appropriate use	Match access, explanation, supervision and consent to learner age and context.	Age-banded use rules and communication
Authorship	Require learners to identify AI contribution and defend decisions, evidence and revisions.	Process record and oral explanation
Escalation	Define stop, preserve, report, support and review steps for harmful output or unsafe interaction.	Incident protocol and rehearsal evidence

Decision questions

1. Could the task work without personal learner data?
2. Does AI replace productive struggle or deepen it?
3. Can a learner challenge an output or opt for an alternative?
4. Does every teacher know the immediate incident route?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
Use rules are understood, rehearsed and connected to safeguarding leadership.	Teachers improvise controls, learners use personal accounts or harmful outputs have no response path.

Field application

Ask staff to respond to a simulated harmful output involving a learner. Time the route from recognition to support, preservation and accountable review.

Scale verified capability, not platform adoption

System leaders need evidence that AI practice improves education and remains governable.

Count reach, but make scale decisions using demonstrated teacher judgement, learner experience, outcome quality, equity, workload and institutional continuity.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Teacher evidence	Use observed lessons, verified outputs, adapted plans, troubleshooting and peer moderation.	Capability portfolio and calibrated rubric
Learner evidence	Examine reasoning, feedback use, authorship, inclusion and new-context performance.	Work sample, interview and transfer task
System evidence	Track approved use, incidents, support, costs, connectivity, vendor changes and policy compliance.	Operational dashboard and decision log
Scale gate	Expand only after repeated use under ordinary conditions and explicit review of who benefits or is excluded.	Approved scale case with conditions

Decision questions

1. What improved because of AI rather than additional attention?
2. Which teachers or learners face higher access or verification burdens?
3. What recurring cost and support obligation grows with scale?
4. What evidence would cause the institution to stop a use?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
Expansion is supported by triangulated evidence and a funded governance model.	Adoption data substitutes for learning evidence or unresolved risks are multiplied.

Field application

Choose one AI use at scale and construct a claim-evidence map. Include counterevidence, uncertainty, cost, equity and the next decision the evidence should trigger.

Move from AI workshop to classroom capability

Use a 90-day professional learning cycle to diagnose, rehearse, apply, coach and institutionalise responsible practice.

PERIOD	GATE	FIELD WORK	OUTPUT
Days 1-15	Diagnose	Observe ordinary conditions, establish the baseline and name the highest-risk assumptions.	Approved baseline and decision register
Days 16-30	Design	Select a bounded use case, define responsibilities and agree the evidence standard.	Signed design brief and risk controls
Days 31-60	Pilot	Run repeated practice under normal constraints; log failures, adaptations and participant experience.	Pilot evidence pack and repair log
Days 61-75	Review	Compare intended capability with observed performance and test equity, cost and continuity.	Review decision with conditions
Days 76-90	Institutionalise	Assign recurring ownership, budget, cadence and escalation routes before expansion.	Operating plan and next review date

Decision record

Teacher capability target	_____

Bounded use case	_____

Learner group	_____

Verification method	_____

Safeguarding control	_____

Fallback method	_____

Evidence owner	_____

Scale decision	_____

Do not certify attendance as competence. Certify what a teacher has demonstrated, under what conditions and with what evidence of responsible judgement.

Evidence anchors and further reading

The frameworks translate public guidance and implementation evidence into practical decision tools.

SOURCE	RESOURCE	ADDRESS
UNESCO	AI Competency Framework for Teachers (2024, updated 2026)	https://www.unesco.org/en/articles/ai-competency-framework-teachers
UNICEF Innocenti	Guidance on AI and Children, version 3.0 (2025)	https://www.unicef.org/innocenti/reports/policy-guidance-ai-children
Ghana Cyber Security Authority	National Child Online Protection Framework (2024)	https://www.csa.gov.gh/resources/National%20COP%20Framework.pdf
UNESCO GEM Report	Technology in education: A tool on whose terms? (2023)	https://gem-report-2023.unesco.org/
UNICEF	Guidance on AI and Children, version 3.0 (2025)	https://www.unicef.org/innocenti/reports/policy-guidance-ai-children
Ghana Cyber Security Authority	National Child Online Protection Framework (2024)	https://www.csa.gov.gh/resources/National%20COP%20Framework.pdf

Use these sources as starting points. Confirm current law, policy, curriculum and regulator guidance before making consequential institutional decisions. This manual is an implementation aid, not legal, financial or safeguarding advice.

Evidence quality protocol

CHECK	QUESTION	RECORD
Currency	Is the source still current for the decision date, jurisdiction and learner group?	Version, publication date and date checked
Authority	Is it primary guidance, independent research, implementation evidence or vendor material?	Source type and responsible institution
Fit	Do its assumptions match the school, infrastructure, language, staffing and safeguarding context?	Transfer limits and local verification needed
Use	Which decision does this source inform, and what would cause that decision to change?	Decision link, owner and review trigger

Build teacher judgement before tool adoption

A practical contribution to stronger AI, coding, robotics and STEM education systems in Ghana and Africa.

The value of a framework is not the elegance of its diagram. It is the quality of the decisions, routines and learning that it makes possible.

About Jonathan Kennedy Sowah

Jonathan is a Ghanaian AI engineer and K-12 STEM systems builder working across robotics, coding, applied artificial intelligence, teacher development and context-aware education technology. His wider portfolio has reached 25,000+ learners, trained 2,500+ educators and engaged 100+ schools. KodeVR has more than 10,000 active learners.

He works with schools, governments, companies and development partners to turn high-visibility technology ambitions into practical learning systems that can operate under real African conditions.

Use this work responsibly

Adapt the tools to the programme, participants, institution and regulatory context. Record assumptions. Seek qualified technical, legal, safeguarding, financial and evaluation review where the decision requires it.

Before commissioning implementation support

QUESTION	A STRONG ANSWER SHOULD NAME
What capability must remain after the engagement?	The learner, teacher and institutional behaviours that should continue without external supervision.
What conditions shape delivery?	The ordinary timetable, infrastructure, language, safeguarding, procurement and maintenance realities.
How will quality be governed?	Decision owners, evidence definitions, review cadence, repair route and stop-or-scale thresholds.
What will the institution inherit?	Reusable learning assets, local capability, documented routines, data rights and an affordable continuity plan.

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