

A COLLABORATIVE INQUIRY CYCLE FOR PROJECT-BASED LEARNING CAPACITY BUILDING: AN IN-HOUSE TRAINING FOLLOW-UP ACTION PLAN FOR TEACHERS AT SMP NEGERI 1 KENDAL

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ABSTRACT

Under Indonesia's Kurikulum Merdeka, schools are expected to implement Deep Learning aligned with the Graduate Profile dimensions. At SMP Negeri 1 Kendal, School Curriculum Document (KSP) analysis for the 2025/2026 academic year identified a declining trend: literacy and numeracy scores fell, particularly in higher-order reasoning; Learning Quality declined due to weaknesses in classroom management and psychological support; and social-character indicators (collaboration, citizenship) also declined, despite high teacher participation in non-official training (94.2%). This paper reports a school-led follow-up action plan (RTL) using a Collaborative Inquiry cycle (Assess, Design, Implement, Measure, Reflect, Change) to deliver a two-day In-House Training (IHT) on Project-Based Learning (PBL), targeting 70% of 37 subject teachers producing quality PBL lesson plans (RPPs). Needs assessment found 76% of teachers struggled to formulate authentic assessment rubrics and 82% of senior teachers struggled to integrate technology creatively; the design therefore combined rubric-writing coaching with ICT training segmented by teacher seniority. Measured against a rubric-based pass threshold (score $\geq 80\%$), the training exceeded its target: 78.38% of RPPs (29 of 37) passed, the ICT-integration component reached 82% against an 80% target, and post-training satisfaction reached 89%. However, the authentic-assessment-rubric component averaged only 78%, below its 85% target, and 8 teachers (21.62%) did not yet meet the passing threshold. A second-cycle follow-up plan was

formulated, combining individual clinical mentoring for these teachers with an upcoming classroom-observation stage to verify implementation, which had not yet been measured at the time of this report.

KEYWORDS: Collaborative inquiry; in-house training; project-based learning; instructional coaching; authentic assessment rubric.

INTRODUCTION

Indonesia's Kurikulum Merdeka requires schools to move beyond knowledge transfer toward holistic competency and character development aligned with the Graduate Profile, operationalized through Deep Learning — an approach that explicitly pushes students toward critical and creative thinking. At SMP Negeri 1 Kendal, this transformation is anchored in the school's vision of producing graduates who are 'independent, of noble character, and technologically capable.'

Analysis of the school's 2025/2026 School Curriculum Document (KSP) identified three concerning trends. First, a decline in academic competency: mean literacy scores fell to 68.6, with the sharpest decline in higher-order reasoning — interpreting and evaluating text content, and reasoning in the Number and Geometry domains. Second, a decline in Learning Quality (falling 1.02 points), attributed mainly to weaknesses in classroom management and teachers' psychological support for students. Third, a decline in social-character indicators, specifically collaboration (down 0.21 points) and citizenship (down 0.14 points). Notably, these declines occurred despite strong teacher engagement in professional development outside the official Merdeka Mengajar Platform (94.2% participation), indicating a gap between teachers' development activity and its translation into classroom practice.

Project-Based Learning (PBL) was identified as the most suitable response to these gaps, since it inherently engages students in critical thinking, communication, and collaborative real-problem solving while strengthening literacy, numeracy, and social character (Thomas, 2000). PBL also enables cross-disciplinary integration and deeper learning experiences consistent with the school's Deep Learning goals. Accordingly, this Follow-Up Action Plan (Rencana Tindak Lanjut/RTL) was developed to implement a structured 'In-House Training (IHT) on Project-Based Learning' program through a Collaborative Inquiry approach (the cycle of Assess, Design, Implement, Measure, Reflect, and Change), aiming to raise the percentage of teachers able to implement PBL integrating Information and Communication Technology (ICT) and Pancasila values to at least 70%.

This paper aims to: (1) describe the operational implementation of the Collaborative Inquiry cycle in designing and delivering the PBL in-house training; (2) report measured training outcomes against the pre-set 70% target; and (3) present the resulting second-cycle follow-up plan addressing teachers who had not yet met the target.

MATERIALS AND METHODS

This paper reports a single-school, principal-led professional-development action account structured around a Collaborative Inquiry cycle — Assess, Design, Implement, Measure, Reflect, and Change — an approach consistent with iterative, evidence-based inquiry cycles used in school improvement (Kaser & Halbert, 2017). It is not a controlled experiment; there was no comparison school, and outcomes were evaluated against pre-set internal targets rather than through inferential statistical testing.

In the Assess stage, a Core Inquiry Team was formed and needs assessment was conducted through triangulated quantitative and qualitative data: a pre-training needs-analysis questionnaire, focus-group discussions with teacher representatives, and review of KSP data. This process found that 76% of teachers reported difficulty formulating integrated authentic assessment rubrics (covering both process and product) and that 82% of senior teachers (Group A) reported significant difficulty creatively integrating ICT into project products. Based on these findings, the Core Inquiry Team set the collaborative-inquiry focus: raising the percentage of teachers able to design and implement PBL integrating ICT and Pancasila values, particularly in authentic-rubric formulation, to at least 70% by the second semester of the 2025/2026 academic year.

In the Design stage, the training module was built on two principles: responsiveness to the identified gaps and a collaborative-inquiry orientation. Seventy percent of training time was allocated to hands-on practice (coaching on rubric formulation and ICT integration) rather than lecture-based content delivery. ICT training was segmented by teacher group: Group A (senior teachers) received training on ICT for assessment and collaboration (Google Forms, Padlet), while Group B (junior/contract teachers) received training on ICT for creative project products (Canva, CapCut), directly responding to the differentiated needs identified in the Assess stage. Success criteria were defined through a lesson-plan (RPP) scoring rubric with three weighted components, reflecting an authentic-assessment design rationale (Wiggins, 1998): clear PBL learning steps from essential question to evaluation (30%), a rubric covering academic competency, skills, and Pancasila-aligned character dimensions (40%),

and explicit ICT integration in learning activities or project products (30%). A teacher's RPP was considered a pass at a minimum score of 80% on this rubric.

In the Implement stage, the two-day, 9-lesson-hour IHT was delivered to all 37 subject teachers (100% attendance required). Day 1 combined a vision-sharing session led by the principal and curriculum coordinator with hands-on, subject-cluster-based work on authentic rubric formulation, guided by facilitator teachers circulating to provide rapid coaching, followed by a whole-group reflection identifying teachers needing individual coaching on Day 2. Day 2 delivered the segmented ICT training described above, followed by one-on-one clinical coaching and review of each teacher's final RPP, which was then submitted as the Design-stage output. Quality-control measures included mandatory full attendance, a daily activity logbook with discussion notes and documentation maintained by administrative staff, and a submission deadline of one day after the training to feed the Measure stage.

In the Measure stage, all 37 submitted RPPs were scored using the RPP rubric described above, and teacher satisfaction was measured through a rapid post-training feedback questionnaire (C-Sat survey) covering material quality, facilities, and coaching. Data were analyzed descriptively by comparing actual results against the pre-set targets for each indicator; no inferential statistical testing or comparison group was used, and this design does not permit isolating the effect of the training from other concurrent school-improvement activities.

RESULTS AND DISCUSSION

Results

Training Outcomes Against Targets

Table 1 compares the pre-set targets with the actual measured results from the rapid post-training assessment (18-19 October 2025).

Key Performance Indicator	Target	Actual Result	Status
Percentage of RPPs passing criteria (score $\geq$ 80%)	70%	78.38% (29 of 37 RPPs)	Exceeded
Mean score, ICT integration component	80%	82%	Exceeded
Mean score, authentic assessment rubric component	85%	78%	Below target (Adequate)
Teacher satisfaction (C-Sat)	80% (Good)	89% (Very Good)	Exceeded

Source: RPP scoring rubric results and post-training C-Sat survey, SMP Negeri 1 Kendal, October 2025.

The overall target — 70% of teachers producing a quality PBL RPP — was exceeded, with 78.38% (29 of 37 RPPs) passing. The ICT-integration component and satisfaction both exceeded their targets, but the authentic-assessment-rubric component averaged 78%, below its 85% target. Eight teachers (21.62%) did not reach the 80% overall passing threshold, and this remaining gap was concentrated specifically in authentic-rubric formulation for higher-order-thinking and character dimensions, not in ICT integration.

DISCUSSION

Interpreting the Differential Result

The gap between the ICT-integration result (exceeded) and the authentic-rubric result (below target) is informative rather than simply a shortfall. It suggests that the segmented, tool-specific ICT coaching (distinct platforms for two clearly differentiated teacher groups) addressed a largely procedural skills gap effectively, consistent with the individualized, partnership-based support central to instructional coaching (Knight, 2007). Formulating authentic assessment rubrics for higher-order thinking and character dimensions, by contrast, requires a deeper conceptual shift in how teachers conceive of assessment — designing criteria that reflect real performance rather than recall (Wiggins, 1998) — which plausibly explains why one round of hands-on coaching narrowed but did not close this gap for all teachers.

It is worth noting, as a design strength, that this evaluation measured outcomes directly tied to the training itself — RPP document quality against a pre-defined rubric, and teacher satisfaction — rather than attributing broader, whole-school outcome indicators to a single short training. This keeps the causal claims of the report closely matched to what the design can actually support.

Reflect: Lessons Learned

The Core Inquiry Team's reflection, conducted immediately after the rapid measurement, concluded that the practice-centered, coaching-supported IHT model was effective, and that the ICT segmentation strategy successfully served both senior and junior teachers according to their distinct needs. At the same time, the persistence of a rubric-formulation gap for 8 teachers indicated that this specific skill requires more intensive, individualized coaching time than a single two-day training can provide.

Change: Second-Cycle Follow-Up Plan

Based on this reflection, three follow-up actions were formulated. First, individual clinical mentoring (Cycle 2) was scheduled for the 8 teachers who had not yet met the passing threshold, delivered by designated facilitator teachers and focused specifically on formulating authentic assessment indicators aligned with Pancasila Student Profile dimensions, rather than on ICT skills. Second, an initial classroom-supervision stage was scheduled for the 29 teachers whose RPPs had already passed, using a classroom-observation rubric as a second Measure stage to verify that RPP quality is actually reflected in classroom interaction and instructional process — a verification step that had not yet been carried out at the time of this report. Third, coaching and co-planning sessions led by facilitator teachers were to be institutionalized as a standing monthly agenda within the school's internal Teacher Working Group (KKG), to embed continuous improvement as an ongoing culture rather than a one-off activity.

Study Limitations

Several limitations should be noted. First, this is a single-school account without a comparison school, so the measured gains cannot be isolated from other concurrent improvement activities or general organizational momentum. Second, and most importantly, the outcomes measured here are RPP document quality and teacher satisfaction; classroom-implementation fidelity and student learning outcomes had not yet been measured at the time of this report, and the school's own plan appropriately schedules this as a subsequent Measure stage rather than presenting it as already confirmed — this transparency is a strength of the original report, but it means the practice's ultimate impact on student learning remains unverified pending that stage. Third, the C-Sat satisfaction survey is a self-report instrument administered to staff evaluating a principal-led program at their own school, which may be subject to social-desirability bias. Fourth, findings are specific to 37 teachers in one school and may not generalize to other contexts. Fifth, the 80% rubric pass threshold is an internally set standard rather than one validated against an external instructional-quality benchmark.

CONCLUSION

A Collaborative Inquiry cycle (Assess, Design, Implement, Measure, Reflect, Change) was used to design and deliver a two-day in-house training on Project-Based Learning at SMP Negeri 1 Kendal, combining rubric-formulation coaching with technology training segmented by teacher seniority. The program exceeded its overall target, with 78.38% of teachers (29 of

37) producing a passing-quality PBL lesson plan, and achieved high satisfaction (89%); however, formulating authentic assessment rubrics for higher-order thinking and character dimensions remained the persistent bottleneck, falling short of its own target and leaving 8 teachers below the passing threshold. This differential result usefully clarifies that technology-integration skills and authentic-assessment-design skills require different kinds of support, with the latter needing more sustained, individualized coaching. A second-cycle plan combining individual clinical mentoring, an upcoming classroom-observation verification stage, and institutionalized monthly coaching sessions was formulated to close the remaining gap. For facilitator teams, the practice suggests prioritizing sustained, individualized coaching specifically on authentic-rubric design rather than treating it as covered by a single training session; for school leadership, it suggests institutionalizing coaching and co-planning as a standing agenda and documenting successful lesson plans as an internal best-practice bank; for future evaluation of this practice, it suggests extending measurement to classroom-observation fidelity and, eventually, student learning outcomes, ideally supported by a comparison cohort to strengthen causal claims about the training's impact.

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REFERENCES

1. Kaser, L., & Halbert, J. (2017). *The spiral playbook: Leading with an inquiring mindset*. C21 Canada.
2. Knight, J. (2007). *Instructional coaching: A partnership approach to improving instruction*. Corwin Press.
3. SMP Negeri 1 Kendal. (2025). *Kurikulum Satuan Pendidikan (KSP) [School Curriculum Document]*, Tahun Ajaran 2025/2026. SMP Negeri 1 Kendal.
4. Thomas, J. W. (2000). *A review of research on project-based learning*. The Autodesk Foundation.
5. Wiggins, G. P. (1998). *Educative assessment: Designing assessments to inform and improve student performance*. Jossey-Bass.