

Reconstructing Teacher Professional Education in Indonesia: From Competence Attributes to Clinical Practice

Hisam Ahyani¹, Arifin Siahaan²

¹ Fakultas Syariah dan Hukum, Institut Miftahul Huda Al Azhar Kota Banjar

² Yayasan Wakaf Tongku Azhar Nahdliyyin

Email: ¹ hisamahyani@gmail.com, ² arifinalmishry@gmail.com

Info Articles	Abstract
Article History Received : 05-09-2026 Revised : 29-09-2026 Published : 05-10-2026 Keywords: <i>clinical practice, teacher certification, teacher education, teacher professional education, teaching capability</i>	Indonesia has invested heavily in teacher professionalisation for two decades, yet experimental evidence shows that a substantial unconditional professional allowance improved teacher welfare without measurable effect on student learning, raising the question of whether the preparation component is designed to develop teaching capability at all. This study aims to examine how legal and regulatory instruments construct professional competence, to compare the resulting programme design with evidence on effective preparation, and to formulate reconstruction feasible under national scale constraints. The research combines qualitative document analysis with normative juridical examination, analysing the National Education System Law, the Teachers and Lecturers Law, government regulations on teachers and national education standards, and ministerial regulation on teacher professional education, tested against scholarship on pedagogical content knowledge, practice-based preparation, and the teacher learning continuum. The findings show that competence is constructed as domains of attribute rather than descriptions of work, producing assessment that measures knowledge about teaching rather than capacity to teach; that the practicum is loosely coupled to coursework, organised around completion rather than mastery of identified practices, and supervised by mentors assigned without selection, preparation, or allocated time; and that the professional allowance functions as a recruitment condition rather than an improvement mechanism. The article recommends national specification of core practices,

Info Articles	Abstract
	systematic mentor selection and preparation, partial performance assessment through recorded practice and prepared mentor judgement, and structured early-career induction.

I. INTRODUCTION

Indonesia has invested more heavily in teacher professionalisation over the past two decades than in almost any other area of education policy. The Teachers and Lecturers Law of 2005 established teaching as a profession requiring formal qualification, defined four domains of professional competence, and attached a substantial professional allowance to certification.¹ Subsequent regulation constructed an elaborate apparatus of certification, and the Teacher Professional Education programme was established as the route through which prospective and serving teachers acquire professional standing.² By any measure of policy attention and fiscal commitment, the professionalisation agenda has been serious.

The learning outcomes that were expected to follow have been harder to identify. The most rigorous available evidence on the Indonesian certification programme a randomised evaluation of the professional allowance found that the substantial salary increase improved teacher welfare and satisfaction but produced no detectable effect on student learning.³ This is among the most policy-relevant findings produced about Indonesian education, and its implication is precise: the pay component of professionalisation, delivered unconditionally, does not by itself change practice. It says nothing about whether professional education changes practice, which is a different question and the one this article examines.

The ideal condition is stated in law with considerable clarity. The Teachers and Lecturers Law defines the teacher's professional competence as mastery of subject matter in breadth and depth, and pedagogical competence as the capacity to manage learning, including understanding learners, designing and implementing instruction, and evaluating

¹ Undang-Undang Nomor 14 Tahun 2005 tentang Guru dan Dosen, Pasal 8, Pasal 10 ayat (1), dan Pasal 16.

² Peraturan Pemerintah Nomor 74 Tahun 2008 tentang Guru sebagaimana diubah dengan Peraturan Pemerintah Nomor 19 Tahun 2017, Pasal 2–4.

³ Joppe de Ree, Karthik Muralidharan, Menno Pradhan, and Halsey Rogers, "Double for Nothing? Experimental Evidence on an Unconditional Teacher Salary Increase in Indonesia," *Quarterly Journal of Economics* 133, no. 2 (2018): 993–1039.

outcomes.⁴ The National Education System Law requires educators to possess the qualifications and competence required to achieve national education objectives.⁵ The regulation governing teacher professional education establishes it as a programme following an undergraduate degree and combining academic study with supervised practice.⁶

The actual condition displays a familiar set of tensions. The programme operates at a scale that strains supervisory capacity; the balance between coursework and practice varies considerably across providers; the practicum is frequently organised around administrative completion rather than around the deliberate development of specific teaching capabilities; and the certification examination that gates entry to the profession measures knowledge about teaching more reliably than it measures the ability to teach. Underlying these is a deeper design question that Indonesian policy discussion has rarely confronted directly: whether teacher preparation is understood as the transmission of professional knowledge or as the development of professional practice, and what follows institutionally from the answer.

Scholarly debate on teacher preparation has converged on several propositions with reasonably strong support. Preparation that is closely connected to clinical practice, organised around identifiable core practices, and supervised by expert practitioners produces better-prepared teachers than programmes in which coursework and field experience are loosely coupled.⁷ The separation between campus courses and school placements the so-called two-worlds problem is among the most persistent weaknesses of teacher education internationally, and addressing it requires structural rather than exhortative measures.⁸ Teacher learning is properly understood as a continuum extending from preparation through induction into continuing practice, and programmes designed as

⁴ Undang-Undang Nomor 14 Tahun 2005, Pasal 10 ayat (1) dan Penjelasan Pasal 10 ayat (1).

⁵ Undang-Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional, Pasal 42 ayat (1).

⁶ Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Nomor 54 Tahun 2022 tentang Pendidikan Profesi Guru, Pasal 2–5.

⁷ Pam Grossman, Karen Hammerness, and Morva McDonald, “Redefining Teaching, Re-imagining Teacher Education,” *Teachers and Teaching: Theory and Practice* 15, no. 2 (2009): 273–289; Deborah Loewenberg Ball and Francesca M. Forzani, “The Work of Teaching and the Challenge for Teacher Education,” *Journal of Teacher Education* 60, no. 5 (2009): 497–511.

⁸ Kenneth M. Zeichner, “Rethinking the Connections between Campus Courses and Field Experiences in College- and University-Based Teacher Education,” *Journal of Teacher Education* 61, no. 1–2 (2010): 89–99.

though preparation were complete at certification systematically overload the preparation phase.⁹

The research gap this article addresses lies in the limited application of this literature to the structure of Indonesian teacher professional education. Indonesian scholarship on the programme is substantial but concentrates on participant satisfaction, competence test results, and administrative implementation; comparatively little examines the programme's design against the evidence on what makes preparation effective, or analyses the regulatory architecture that determines what providers can and cannot do. The novelty of this article lies in that analysis, and in its argument that the programme's central weakness is the treatment of practice as a site where knowledge is applied rather than as the object that preparation is designed to develop.

Three research questions follow. First, how do the legal and regulatory instruments governing Indonesian teacher professional education construct professional competence, and what model of professional learning does that construction presuppose? Second, what does the research evidence establish about the conditions under which preparation develops teaching capability, and how does the Indonesian design compare? Third, what reconstruction of programme design, practicum organisation, and assessment would align the programme with those conditions?

II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The foundational distinction in this literature is between knowledge about teaching and knowledge for teaching. Shulman's account of pedagogical content knowledge identified a category of professional knowledge distinct from both subject matter and general pedagogy: knowledge of how particular content can be represented to learners, what makes specific topics difficult, and what conceptions students bring.¹⁰ This category is significant for programme design because it is acquired neither in the disciplinary faculty nor in generic education courses, but in the deliberate examination of teaching particular content to particular learners.

Lortie's analysis supplies the reason preparation is harder than it appears. Prospective teachers arrive having observed teaching for many thousands of hours as students, and this apprenticeship of observation furnishes them with a vivid but superficial

⁹ Sharon Feiman-Nemser, "From Preparation to Practice: Designing a Continuum to Strengthen and Sustain Teaching," *Teachers College Record* 103, no. 6 (2001): 1013–1055.

¹⁰ Lee S. Shulman, "Those Who Understand: Knowledge Growth in Teaching," *Educational Researcher* 15, no. 2 (1986): 4–14.

model of the work one that captures its visible performance while concealing the planning, diagnosis, and judgement beneath.¹¹ Preparation that does not deliberately confront this inherited model tends to be absorbed into it rather than to displace it, which explains the frequently observed phenomenon of teachers who can articulate progressive principles and teach as they were taught.

The practice-based turn in teacher education responds to these findings. Its central proposal is that preparation be organised around identified core practices explaining a concept, leading a discussion, eliciting student thinking, responding to an incorrect answer which are decomposed, modelled, rehearsed under supervision, and enacted in classrooms with feedback.¹² The comparison with other professions is instructive: preparation in clinical fields is organised around supervised performance of defined procedures, with progressive release of responsibility, and the analogous structure in teacher education is the exception rather than the norm.¹³

Comparative work on high-performing systems identifies a consistent set of features: selective entry, preparation integrated with clinical practice in designated schools, mentoring by expert teachers with time allocated for the role, and induction support in the early years.¹⁴ The last of these deserves emphasis, because the continuum argument implies that a system which invests heavily in preparation while providing no structured induction has misallocated its investment: the early years of teaching are when practice is formed, and unsupported entry produces the consolidation of survival strategies rather than of professional practice.¹⁵

The theoretical gap addressed here concerns the interaction between these design principles and the regulatory and scale conditions of a large, centralised system. The practice-based literature has developed largely in contexts where individual programmes exercise substantial design autonomy and where the number of candidates is small relative to the supply of expert mentors. Indonesian teacher professional education operates at a scale of tens of thousands of candidates annually under a common regulatory framework, and this combination generates design constraints that the literature does not directly

¹¹ Dan C. Lortie, *Schoolteacher: A Sociological Study* (Chicago: University of Chicago Press, 1975), 61–81.

¹² Ball and Forzani, “The Work of Teaching,” 497–511; Grossman, Hammerness, and McDonald, “Redefining Teaching,” 273–289.

¹³ Pam Grossman, Christa Compton, Danielle Igra, Matthew Ronfeldt, Emily Shahan, and Peter Williamson, “Teaching Practice: A Cross-Professional Perspective,” *Teachers College Record* 111, no. 9 (2009): 2055–2100.

¹⁴ Linda Darling-Hammond, *Empowered Educators: How High-Performing Systems Shape Teaching Quality around the World* (San Francisco: Jossey-Bass, 2017), 1–26.

¹⁵ Feiman-Nemser, “From Preparation to Practice,” 1026–1039.

address. The framework adopted here therefore applies the practice-based criteria while treating scale and regulatory uniformity as parameters rather than as defects.

III. RESEARCH METHOD

This study employs qualitative document analysis combined with normative juridical examination of the regulatory framework governing teacher professional education. The combination is required because the research questions concern both the legal construction of professional competence and the design of a programme against an evidentiary standard.¹⁶

Two approaches are combined. The statutory approach examines legislation and subordinate regulation governing the teaching profession, certification, and professional education, with attention to the competence framework each instrument establishes. The conceptual approach tests the resulting design against criteria derived from the research literature on effective preparation, identifying points of alignment and divergence.

Materials are organised in three tiers. Primary materials comprise Law Number 20 of 2003 on the National Education System; Law Number 14 of 2005 on Teachers and Lecturers; Government Regulation Number 74 of 2008 on Teachers as amended by Government Regulation Number 19 of 2017; Government Regulation Number 57 of 2021 as amended on National Education Standards; and Regulation of the Minister of Education, Culture, Research and Technology Number 54 of 2022 on Teacher Professional Education. Secondary materials comprise peer-reviewed scholarship on teacher preparation, professional knowledge, and the teacher learning continuum, together with the experimental evaluation of the Indonesian certification allowance. Supporting materials comprise comparative reports on teacher policy and international survey evidence on teacher practice and professional development.¹⁷

Analysis proceeded in four stages. The regulatory corpus was coded for provisions defining competence, specifying programme structure, and governing assessment. The resulting design was characterised in terms of its implicit model of professional learning. Criteria derived from the research literature were then applied to identify divergences. Finally, reconstruction proposals were developed and tested against the scale and

¹⁶ Peter Mahmud Marzuki, *Penelitian Hukum*, rev. ed. (Jakarta: Kencana Prenada Media, 2017), 133–142; Glenn A. Bowen, “Document Analysis as a Qualitative Research Method,” *Qualitative Research Journal* 9, no. 2 (2009): 27–40.

¹⁷ OECD, *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners* (Paris: OECD Publishing, 2019), 145–172.

regulatory constraints identified. The study analyses programme design rather than programme delivery; claims about what occurs in practicum settings are derived from documented structure and from comparative evidence rather than from direct observation.

IV. RESULTS AND DISCUSSION

A. The Competence Framework and Its Implicit Model

The four-domain competence framework pedagogical, personal, social, and professional has structured Indonesian teacher policy for two decades. Its virtues are real: it recognises that teaching involves more than subject mastery, and it gives statutory standing to dimensions of professional conduct that might otherwise be treated as informal expectations.

Its limitation, from a design perspective, is that the domains are categories of attribute rather than descriptions of work. A framework built from attributes invites assessment of whether a candidate possesses them, and possession is most easily evidenced through written examination and documentation. A framework built from practices what a teacher must be able to do, in what situations, to what standard invites assessment of performance. The Indonesian framework is of the first type, and the assessment apparatus that has grown around it reflects this: the competence tests that gate certification measure knowledge about pedagogy and subject matter with reasonable reliability, and measure the capacity to teach hardly at all.

This is not a criticism of the individuals who designed the instruments, who face a genuine constraint: performance assessment at a scale of tens of thousands of candidates is expensive and difficult to standardise. It is, however, a consequential design choice whose effects propagate through the system. Candidates prepare for what is assessed; providers orient their programmes toward what candidates need; and the practicum, which is where teaching capability would be developed, becomes the component with the least assessment weight and therefore the least attention.

The implicit model of professional learning is accordingly one of knowledge acquisition followed by application. Academic study establishes the knowledge base; the practicum provides an opportunity to apply it; certification confirms that the knowledge

has been acquired. This model is intuitive, institutionally convenient, and contradicted by the evidence on how teaching capability actually develops.¹⁸

B. The Practicum as the Programme's Weakest Component

The research evidence identifies supervised practice as the component that most strongly predicts preparedness, and the Indonesian practicum exhibits several of the weaknesses the literature has documented internationally.

The first is loose coupling. Where the placement school's practice diverges from what campus courses advocate, the candidate must reconcile the two without support, and the resolution overwhelmingly favours the setting in which they are being evaluated and socialised. This is the two-worlds problem, and it is not solved by asking candidates to reflect on the discrepancy.¹⁹

The second is the mentor role. Effective mentoring is a distinct professional capability observing analytically, giving specific feedback on identified practices, modelling with explanation, progressively releasing responsibility and it is not an automatic property of experienced teaching. Where mentors are assigned by availability rather than selected by capability, receive no preparation for the role, and are given no time allocation for it, mentoring reduces to supervision of attendance and general encouragement. The regulatory framework contemplates mentoring without establishing the conditions that would make it substantive.

The third is the object of the practicum. Where the practicum is organised around completing a required number of teaching hours and producing documentation, its object is completion. Where it is organised around the progressive mastery of identified practices, with observation focused on those practices and feedback specific to them, its object is capability. The difference is not one of duration but of structure, and it determines whether extended time in schools produces development or merely exposure.

Table 1. Preparation Design: Evidence-Based Criteria and the Indonesian Position

Criterion from Research	What It Requires	Indonesian Position	Consequence
-------------------------	------------------	---------------------	-------------

¹⁸ Grossman, Hammerness, and McDonald, "Redefining Teaching," 276–283; Ball and Forzani, "The Work of Teaching," 500–507.

¹⁹ Zeichner, "Rethinking the Connections," 90–95.

Criterion from Research	What It Requires	Indonesian Position	Consequence
Practice-based curriculum	Identified core practices; decomposition, modelling, rehearsal	Attribute-based competence domains	Assessment measures knowledge about teaching
Tight coupling of coursework and placement	Shared framework; joint work between provider and school	Loose institutional coupling	Candidates resolve conflict in favour of the placement setting
Expert mentoring	Selection by capability; preparation; time allocation	Assignment by availability; no allocated time	Mentoring reduces to supervision
Performance assessment	Observation of teaching against standards	Written competence testing at scale	Practicum carries least assessment weight
Structured induction	Supported early years with reduced load	Limited provision	Survival strategies consolidate as practice

Source: Author's analysis of the regulatory framework and research literature, 2026.

C. Certification, Pay, and the Limits of Incentive

The experimental evidence on the professional allowance requires careful interpretation, because it is frequently overread in both directions. The finding is that a large, unconditional, permanent salary increase produced substantial improvements in teacher welfare and no measurable improvement in student learning.²⁰

What this does not establish is that teacher pay is unimportant. Adequate remuneration affects who enters and remains in the profession, and its effects operate over a horizon longer than any evaluation can capture. What it does establish is narrower and still important: paying existing teachers more, without changing what they know how to do

²⁰ de Ree et al., "Double for Nothing?" 1025–1033.

or the conditions under which they work, does not change what happens in classrooms. Money is not a mechanism of practice change; it is a condition that makes other mechanisms feasible.

The policy implication is that the allowance should be understood as a recruitment and retention instrument rather than as an improvement instrument, and that improvement requires the separate investment in capability that the professionalisation agenda has funded far less generously. There is an uncomfortable arithmetic here: the fiscal weight of the allowance dwarfs the weight of the professional education programme, and the component with the demonstrated effect on practice is the one receiving the smaller share.

A related question concerns what certification certifies. If certification attests that a candidate has passed examinations of professional knowledge, it certifies something real but limited. If it is understood as it is in public discussion and in the salary structure to attest professional capability, it overclaims. Closing that gap requires either moderating the claim or changing what is assessed, and the second is preferable if it can be made feasible.

D. Feasible Reconstruction under Scale Constraints

The design principles identified above are frequently dismissed in Indonesian discussion as unaffordable at national scale. This objection deserves to be taken seriously and then examined, because several of the principles are less expensive than they appear.

Identifying core practices is a one-time intellectual investment, not a recurring cost. A national specification of a limited set of high-leverage practices with worked examples, video exemplars, and observation protocols would cost a fraction of the certification apparatus and would give providers, mentors, and candidates a common object of attention. Its absence is the reason practicum supervision currently varies so widely.

Preparing mentors is a recurring cost but a modest one relative to programme scale, and it has the highest expected return of any available investment because it multiplies across every candidate a mentor supervises. Selecting mentors by demonstrated capability rather than by seniority or availability costs nothing beyond the administrative effort of establishing criteria.

Performance assessment at scale is the genuinely difficult constraint. Full observational assessment of every candidate is not feasible. Two partial responses are available: structured portfolios containing recorded teaching against specified practices, assessed by trained raters on a sampling basis with moderation; and the transfer of a substantial share of assessment weight to the mentor's structured judgement, which is

feasible precisely to the extent that mentors have been prepared. Neither is perfect. Both are considerably better than measuring knowledge about teaching and inferring capability.

Induction is the component most often omitted on cost grounds and most likely to be cost-effective. A first-year teacher with a reduced load, a designated mentor, and structured observation cycles develops practice; the same teacher given a full load and left alone develops coping strategies that then persist for decades. The cost is real; the counterfactual cost of a career of consolidated survival practice is larger and invisible.

E. Comparative Lessons and Their Limits

Comparative analysis of systems that have improved teaching quality identifies a consistent pattern: preparation integrated with clinical practice, selective entry, expert mentoring, and structured induction, supported by a career structure that makes teaching an attractive long-term prospect.²¹ Three cautions apply to transferring this pattern.

The first concerns selectivity. Systems with highly selective entry generally achieved selectivity as a consequence of teaching's attractiveness rather than as a policy imposed in advance, and attempting selectivity in a system with recruitment difficulties can produce shortage rather than quality. The sequencing matters, and the Indonesian position with substantial regional variation in both supply and attractiveness does not admit a single national answer.

The second concerns institutional density. Clinical models depend on a supply of schools with strong practice capable of hosting candidates, and such schools are unevenly distributed. A realistic model builds designated partner schools progressively rather than assuming their availability, and this is an argument for staged rather than uniform implementation.

The third concerns coherence over time. The features that distinguish high-performing systems were built over decades with substantial policy stability. Indonesian teacher policy has been revised frequently, and each revision imposes transition costs on providers and candidates while restarting the accumulation of institutional capability. Stability is itself a policy instrument, and it is among the least expensive available.

F. Implications for Providers and for Continuing Development

Two further implications deserve statement.

²¹ Darling-Hammond, *Empowered Educators*, 1–26; OECD, *TALIS 2018 Results (Volume I)*, 145–172.

For providers, the analysis implies a reallocation of institutional effort from coursework delivery toward the organisation of practice. This is uncomfortable, because coursework is what universities are structured to deliver and clinical supervision is not. It requires academic staff who are current in school practice, partnership arrangements with schools that are substantive rather than nominal, and internal recognition structures that value clinical supervision as academic work. The last of these is frequently the binding constraint: where promotion depends on publication, the most capable staff will not invest in practicum supervision, however clearly policy directs them to.

For continuing professional development, the continuum argument implies that preparation should be designed to establish a foundation for continued learning rather than to produce a finished professional. This has a specific design consequence: candidates should leave preparation able to examine their own teaching systematically to gather evidence about student learning, to identify what is not working, and to test a change. A teacher with this capability continues to develop; a teacher without it repeats. Building it is a more realistic aim for preparation than comprehensive competence, and a more useful one.

G. Equity, Regional Supply, and the Distribution of Quality

Teacher policy is also distributive policy, and the Indonesian design has distributive effects that deserve explicit analysis.

The first concerns geography. Preparation quality depends substantially on the availability of strong placement schools and capable mentors, and both are concentrated in urban centres and in provinces with longer histories of institutional investment. A uniform national programme delivered under uneven conditions produces uneven graduates, and the unevenness compounds: regions with weaker schools prepare weaker teachers, who then staff those schools. Without deliberate counteraction, a national professionalisation programme can widen the very disparity it was meant to close.

The counteraction available is not primarily financial. It involves identifying and supporting strong practice wherever it exists, including in schools that are not otherwise distinguished; building mentor capability in under-served regions as a priority rather than as an extension of provision elsewhere; and resisting the temptation to concentrate designated partner schools in provincial capitals for administrative convenience.

The second concerns entry into the profession. Where the route to certification is long, costly, and concentrated in particular institutions, candidates from families able to absorb the cost and from regions hosting providers are advantaged. The teaching

workforce then becomes less representative of the population it serves, with consequences that are educational as well as distributive: teachers who share the linguistic and social context of their students hold knowledge that cannot be supplied by preparation. Attention to the accessibility of the certification route, including provision for candidates already teaching in remote schools, is therefore a matter of educational quality and not only of fairness.

The third concerns retention. Preparation is an investment whose return depends on how long the prepared teacher remains in the profession and where. Systems that prepare teachers well and then place them in conditions that drive early exit have wasted the investment. This connects teacher education to questions apparently distant from it school leadership quality, workload, the administrative burden discussed in the wider Indonesian reform literature and it is a reason to treat preparation policy as one component of a workforce strategy rather than as a self-contained programme.

H. Objections and Alternative Readings

Three objections to the argument deserve direct engagement.

The first holds that the attribute-based competence framework is a legal instrument rather than a pedagogical one, and should not be judged by pedagogical criteria. There is force in this: a statutory definition of competence serves purposes of qualification, remuneration, and discipline that a list of teaching practices could not. The response is that the statutory framework has in fact become the organising structure of preparation and assessment, and that its pedagogical consequences follow whether or not they were intended. Nothing in the statute prevents a practice-based specification from being developed at the level of programme design; the argument here is addressed to that level rather than to the law itself.

The second holds that performance assessment is unreliable at scale, and that written examination whatever its limitations at least produces comparable results. This is a serious objection, and the reliability concern is real. The response is that comparability of an invalid measure is not a virtue: a highly reliable assessment of the wrong construct supports confident wrong decisions. The proposal advanced here is deliberately partial for this reason, combining sampled performance assessment with prepared mentor judgement rather than claiming that full observational assessment is achievable.

The third holds that the analysis understates what Indonesian teacher education has achieved. This is worth conceding. The expansion of qualification levels, the establishment of a professional route, and the recognition of teaching as a profession requiring formal

preparation are substantial accomplishments by any comparative standard, achieved at a scale few systems have attempted. The argument of this article is not that the programme has failed but that it has reached the limit of what its current design can deliver, and that the next stage of improvement requires a different conception of what preparation is for.

I. Online Delivery and the Hybrid Programme

A substantial share of Indonesian teacher professional education, particularly for serving teachers, is delivered through online modules combined with limited face-to-face and school-based components. This design responds to a real constraint candidates are dispersed across an archipelago and many are already teaching and it has made provision possible at a scale that residential delivery could not reach. Its consequences for what is learned nonetheless deserve examination.

Online delivery is well suited to the transmission of propositional knowledge and poorly suited to the development of performance. Reading about how to elicit student thinking, completing an assignment analysing a case, and passing a test on the underlying theory are all achievable online and none of them develops the capability. Where the programme's assessment weight rests on components that online delivery handles well, the medium quietly determines the curriculum: what can be delivered and assessed at distance becomes what the programme is about.

Two modifications would substantially improve the model without abandoning its reach. The first is the systematic use of recorded teaching. A candidate who records a lesson segment, analyses it against a specified practice, receives structured feedback from a prepared mentor, and records a revised attempt has completed a cycle of deliberate practice that is genuinely formative and entirely compatible with distance delivery. The technical requirements are modest and largely already present. What is missing is the specification of practices against which the recording is analysed, and the mentor capability to give feedback on them which are the same two gaps identified earlier, appearing here in a different form.

The second is the use of the candidate's own classroom as the site of practice for serving teachers. A serving teacher enrolled in professional education has continuous access to the setting in which capability is developed, and a programme that treats that setting as the principal learning environment rather than as a scheduling obstacle would be both more effective and less burdensome. This implies restructuring assignments around cycles of enquiry into the candidate's own teaching identify a difficulty in student learning,

design a change, gather evidence, evaluate rather than around the production of academic artefacts detached from practice.

A caution is warranted about workload. Serving teachers carrying a full teaching load while completing a professional education programme are working substantially beyond ordinary capacity, and programme designs that add requirements without removing anything produce completion strategies rather than learning. Where a programme is delivered to serving teachers, the realistic design question is not what more can be required but what the candidate's existing work can be reorganised to accomplish. A programme built around systematic enquiry into teaching the candidate is already doing answers this question better than one built around additional coursework.

Finally, the quality assurance of online provision requires attention on its own terms. Where modules are delivered at scale with limited interaction, the difference between a programme and a repository is the quality and frequency of feedback, and feedback is the component most easily degraded under cost pressure. Monitoring that counts module completions measures the repository; monitoring that samples the specificity and usefulness of feedback measures the programme.

V. CONCLUSION

This article has examined the design of Indonesian teacher professional education against the evidence on effective preparation, and has argued that its central weakness is the construction of professional competence as attribute rather than as practice.

In response to the first research question, the regulatory framework defines competence through four domains of attribute, and the assessment apparatus built upon it measures knowledge about teaching rather than the capacity to teach, producing an implicit model in which knowledge is acquired and then applied. In response to the second, the research evidence indicates that capability develops through decomposed, modelled, rehearsed, and supervised practice; that loosely coupled coursework and placement allow the placement setting to determine what is learned; and that mentoring is a distinct capability requiring selection, preparation, and time. The Indonesian design diverges from these conditions at each point. In response to the third, feasible reconstruction under scale constraints comprises a national specification of core practices, systematic mentor preparation and selection, partial performance assessment through recorded practice and prepared mentor judgement, and structured induction in the early years.

The theoretical implication is that the experimental finding on unconditional salary increases should be read as evidence about mechanisms rather than as evidence about

teachers: remuneration is a condition of professional quality and not a means of producing it, and systems that invest heavily in the condition while underfunding the mechanism should expect the pattern that has been observed.

The practical implications are addressed to policymakers, who should rebalance investment from allowance toward capability and treat mentor development as the highest-return available expenditure; to providers, who should reallocate institutional effort toward the organisation of clinical practice and align internal recognition accordingly; and to school leaders, who determine whether a placement or an induction year becomes formative or merely survived.

Further research should pursue three directions: observational study of what candidates actually do and learn during the practicum; evaluation of mentor preparation as an intervention, which is readily amenable to experimental design; and longitudinal study of early-career teachers to establish whether structured induction produces durable differences in practice.

REFERENCES

- Ball, Deborah Loewenberg, and Francesca M. Forzani. "The Work of Teaching and the Challenge for Teacher Education." *Journal of Teacher Education* 60, no. 5 (2009): 497–511.
- Bowen, Glenn A. "Document Analysis as a Qualitative Research Method." *Qualitative Research Journal* 9, no. 2 (2009): 27–40.
- Darling-Hammond, Linda. *Empowered Educators: How High-Performing Systems Shape Teaching Quality around the World*. San Francisco: Jossey-Bass, 2017.
- Darling-Hammond, Linda, and John Bransford, eds. *Preparing Teachers for a Changing World: What Teachers Should Learn and Be Able to Do*. San Francisco: Jossey-Bass, 2005.
- Darling-Hammond, Linda, Maria E. Hyler, and Madelyn Gardner. *Effective Teacher Professional Development*. Palo Alto: Learning Policy Institute, 2017.
- de Ree, Joppe, Karthik Muralidharan, Menno Pradhan, and Halsey Rogers. "Double for Nothing? Experimental Evidence on an Unconditional Teacher Salary Increase in Indonesia." *Quarterly Journal of Economics* 133, no. 2 (2018): 993–1039.
- Feiman-Nemser, Sharon. "From Preparation to Practice: Designing a Continuum to Strengthen and Sustain Teaching." *Teachers College Record* 103, no. 6 (2001): 1013–1055.
- Grossman, Pam, Christa Compton, Danielle Igra, Matthew Ronfeldt, Emily Shahan, and Peter Williamson. "Teaching Practice: A Cross-Professional Perspective." *Teachers College Record* 111, no. 9 (2009): 2055–2100.
- Grossman, Pam, Karen Hammerness, and Morva McDonald. "Redefining Teaching, Re-imagining Teacher Education." *Teachers and Teaching: Theory and Practice* 15, no. 2 (2009): 273–289.



- Hargreaves, Andy, and Michael Fullan. *Professional Capital: Transforming Teaching in Every School*. New York: Teachers College Press, 2012.
- Lortie, Dan C. *Schoolteacher: A Sociological Study*. Chicago: University of Chicago Press, 1975.
- Marzuki, Peter Mahmud. *Penelitian Hukum*. Rev. ed. Jakarta: Kencana Prenada Media, 2017.
- OECD. *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*. Paris: OECD Publishing, 2019.
- Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Nomor 54 Tahun 2022 tentang Pendidikan Profesi Guru.
- Peraturan Pemerintah Nomor 57 Tahun 2021 tentang Standar Nasional Pendidikan sebagaimana diubah dengan Peraturan Pemerintah Nomor 4 Tahun 2022.
- Peraturan Pemerintah Nomor 74 Tahun 2008 tentang Guru sebagaimana diubah dengan Peraturan Pemerintah Nomor 19 Tahun 2017.
- Schön, Donald A. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books, 1983.
- Shulman, Lee S. "Those Who Understand: Knowledge Growth in Teaching." *Educational Researcher* 15, no. 2 (1986): 4–14.
- Undang-Undang Nomor 14 Tahun 2005 tentang Guru dan Dosen.
- Undang-Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional.
- Zeichner, Kenneth M. "Rethinking the Connections between Campus Courses and Field Experiences in College- and University-Based Teacher Education." *Journal of Teacher Education* 61, no. 1–2 (2010): 89–99.