Systemic Constraints Facing Teacher Professional Development in a Middle-Income Country: Indonesia's Experience Over Four Decades

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Abstract

Despite government efforts to reform teacher professional development (TPD) in the past four decades, Indonesian teacher quality remains low. Why have the improvement efforts failed? In the present study we investigate what caused these reforms to fail from two angles. First, we examine the efficacy of the latest teacher professional development (TPD) initiative in Indonesia, *Pengembangan Keprofesian Berkelanjutan* or PKB (Continuing Professional Development), and identify the factors affecting its efficacy. We found that some essential features of effective TPD are missing in PKB. The PKB programme has not targeted teachers based on years of experience, has not followed up teachers with post-training activities, has not incorporated teaching practice through lesson enactment, and has not built upon teacher existing practice. Second, our analysis demonstrates that PKB's weaknesses have existed in Indonesia's previous TPD initiatives as far back as four decades ago. This indicates that the long-term problem of TPD's ineffectiveness is driven by different elements of the education system beyond the TPD's technical and operational aspects. Our system-level analysis points out that merely improving the technical aspects of TPD would be insufficient given the Indonesian education system's lack of coherence surrounding teacher quality. The problems surrounding the provision of effective TPD is more complex than simply a matter of replacing the "old" with the "new" initiative. The change requires a reorientation of the education system to produce high-quality teachers.

Keywords: Teacher Professional Development, Teacher Quality, Education System Accountability, Indonesia

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Abbreviations

FGD		focus group discussion
ICT		information and communication technology
KKG	*kelompok kerja guru*	teacher working group
MGMP	*subject teachers support group*	musyawarah guru mata pelajaran
MoEC		Ministry of Education and Culture
PEQIP		Primary Education Quality Improvement Project
PGRI	*Persatuan Guru Republik Indonesia*	Teachers Association of the Republic of Indonesia
PGSD	*Pendidikan Guru Sekolah Dasar*	Primary School Teacher Education
PISA		Programme for International Student Assessment
PKB	*Pengembangan Keprofesian Berkelanjutan*	Continuing Professional Development
PKG	*Pemantapan Kerja Guru*	Strengthening the Work of Teachers
PLPG	*Pendidikan dan Latihan Profesi Guru*	Education and Training for the Teaching Profession
PPPPTK	*Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan*	Centre for Teacher and Education Personnel Development and Empowerment
TPD		teacher professional development
UKG	*Uji Kompetensi Guru*	Teacher Competence Test

1. Introduction

An effective teacher professional development (TPD) is vital for the advancement of the education system (Wolf et al., 2019; Evans and Popova, 2016; Althauser, 2015; OECD, 2014). In the high-income countries context, effective TPD adopts either a situative or inquiry model, which structures teacher learning around teacher's learning community or classroom, making their newly acquired skills adaptive and relevant to their teaching experience and context (OECD, 2014; Borko, Jacobs and Koellner, 2010; Desimone, 2009). In contrast, comparative studies show that developing countries generally use cascade model, a traditional TPD model that focuses on aligning teacher practice on education policy and standards (Hassler, Hennessy and Hoffmann, 2018; Nordstrum, 2015). Kenya, Burkina Faso, and Benin are among the countries that continue to adopt the cascade model as the dominant mode of delivery of TPD programmes, most of which are delivered in short-term skills training workshops (Hassler, Hennessy and Hoffmann, 2018).

Borko, Jacobs and Koellner (2010) noted that TPD programmes have shifted from traditional rigid training to grounded and inquisitive learning opportunities. The current discourse on TPD highlights common features attributable to effective programmes. An effective TPD programme has subject-focused content, sustained duration with organised follow-ups and coaching, and adult-learning principles.

Subject-focused is the most mentioned characteristic in the TPD literature, referring to the link between materials provided and what teachers teach in their class (Desimone, 2009). Through subject-focused design and lesson enactment, teachers are given the opportunity to inquire how their instructional practices in the classroom relate to the subject matters. Content of the programme should also address teacher's existing believes and experiences. Per the adult-learning theory, teachers participating in TPD programmes carry with them their experiences—a significant determinant of a teacher's instructional ideas (Hadi, 2002). Addressing teachers' experiences is then crucial to ensure that the newly acquired skills and knowledge are woven effectively into teachers' existing brick of teaching experience (Darling-Hammond, Hyler and Gardner, 2017; Desimone, 2009). Popova et al. (2018) provided empirical support with their findings, which suggested that TPD programmes that match the training to teachers' years of experience lead to higher learning outcomes. Building on what teachers already know and their daily experiences is a critical feature of an effective TPD. Such active learning forms have been linked to additional learning growth compared to a TPD without the components mentioned earlier.

As an effective TPD accommodates teachers' daily practices and experiences, it is naturally situated within teachers' contexts (Popova et al., 2018; van Veen, Zwar and Meirink, 2012; Borko, Jacobs and Koellner, 2010). Such a design allows teachers to critically assess their teaching practices within their respective contexts, while the programme serves as a professional learning community for teachers' continuing sources of support and ideas (van Veen, Zwar and Meirink, 2012; McDiarmid, 1995). In contrast to the effective TPD design, one-off seminars in centralised locations have been criticised for lacking sustained duration, fragmented, and episodic, rendering the training moot of rigorous learning necessary to yield substantial accumulative learning (Darling-Hammond, Hyler and Gardner, 2017; Borko, Jacobs and Koellner, 2010).

Albeit reforming the design or technical features is critical, the literature on TPD have grown to argue that since TPD is embedded within the education system, it is, therefore, a by-product of a complex web of system's interaction (Little, 1993). Coherence with the education system has been identified in recent TPD literature as a vital ingredient of an effective TPD. Bolam and McMahon (2005, p.35) further elaborated, "TPD policies and practices are necessarily rooted in the particular context of a single educational system and, indeed, are often the product of unique and dynamically changing sets of circumstances—political, economic, social, cultural, historical, professional, and technical—in that system." In other words, interaction within the system is a critical hit or miss factor in a professional development programme, and therefore, the programme's efficiency or inefficiency needs to be assessed in conjunction with the context (Pritchett, 2017).

This paper contributes to the contemporary discussion in TPD literature on whether the difficulty of implementing effective TPD rests in its design space, within the context in which it operates, or both. We use Indonesia as a case study because even though both its TPD and education policy environment have gone through several reformulations—although not parallel—yet, the country's learning outcomes remain stagnant and even declined at a certain period (OECD, 2019; Beatty et al., 2018). In the present study, we closely observe the latest TPD initiative in Indonesia, the *Pengembangan Keprofesian Berkelanjutan* or PKB (Continuing Professional Development) programme. This recent TPD reform has addressed some issues in the previous TPD initiatives by incorporating several effective TPD features, but poor student learning outcomes persist.

The study is anchored by two research questions. First, what is the efficacy of the PKB programme? Second, how has the coherence of Indonesia's education system affected PKB's efficacy? Our findings indicate that on paper, PKB has several features of an effective TPD programme mentioned in the literature, yet they are not implemented. Meanwhile, other

essential features of an effective TPD programme, such as targeting teachers based on year of experience, following up teachers with post-training activities, incorporating teaching practice through lesson enactment, and building upon teacher existing practice, do not exist in PKB. Given that PKB only incorporates some of the effective TPD features described in the literature, it is unsurprising that we observed no significant improvement in teachers' instructional practices after they completed the Programme.

The problems with TPD programme in Indonesia do not rest in the design space alone. We found that Indonesia's education system is incoherent around teacher quality. The state does not provide strong delegation to the Ministry of Education and Culture (MoEC) on the importance of producing high-quality teachers. Moreover, the TPD is underfunded, and the frontline providers' outcomes are evaluated based on compliance towards bureaucratic processes rather than on student learning progress. These environments have contributed to low awareness of the importance of effective TPD activities among education stakeholders. Consequently, the TPD ineffectiveness that chronically emerged in Indonesia was the predictable result of a system that did not include learning as its primary focus.

We structure the rest of the paper into six sections. The next section describes the research methods. The third section provides an overview of the implementation of TPD in Indonesia in the past and its present forms. The fourth and fifth sections present our analysis of the efficacy of PKB, along with a broader analysis of how features of the Indonesian education system influence the efficacy of PKB. In the last section, we reflect on the future direction of TPD reform in Indonesia. These lessons are relevant for other countries with similar context.

2. Methodology

This study uses data collected from three Indonesian districts: Yogyakarta, Kebumen, and Gorontalo. Since teacher participation in the PKB's in-service training is linked to their *Uji Kompetensi Guru* or UKG (Teacher Competence Assessment) scores, we chose these districts based on the average scores of teacher performance in the assessment to obtain representation from districts with high, medium, and low average teacher competence. We also considered the area's geographic size (small and large district) and the level of local government support for the PKB programme.

Yogyakarta is a small urban city where about 40% of teachers scored lower than the UKG's minimum passing grade. Kebumen is a large district, with almost twice the number of teachers than Yogyakarta and a similar proportion of low-scoring teachers. Gorontalo is also

a large district, but the size of its population is the smallest of the three districts. Therefore, Gorontalo has a small number of teachers (only half as many as Yogyakarta), 57% of whom scored lower than the UKG's minimum passing grade. In Gorontalo and Kebumen, over 2,000 teachers have participated in the PKB training since 2016. In Yogyakarta, as of 2017, the training had covered over 1,300 teachers. As of 2016, nationally, over 420,000 teachers participated in PKB (Tamzil, Rivai and Tsani, 2019). Given that the original target was to train 1.3 million teachers who failed to meet the 2015 UKG passing grade, this number is scant.

In terms of government support, PKB's in-service trainings in Yogyakarta and Kebumen are funded by the central government and the respective district governments. In Gorontalo, teachers have to pay for the training themselves because the Gorontalo Education Agency does not have the budget.

We employed a combination of qualitative research methods to gain information on the design and implementation of the PKB programme, with a focus on the training for primary school teachers. We collected the data using several techniques: in-depth interviews, group discussions, focus group discussions (FGD), observations in student classrooms, and PKB's in-service training sessions. In total, in each district we completed thirty-five in-depth interviews, five FGDs, two group discussions with students, and four classroom observations. In Yogyakarta, we also conducted two group discussions with parents. Interviewees were selected based on their relation to TPD, whether as managers, beneficiaries, or stakeholders of the programme. Informants include PKB teacher participants, school principals, school supervisors, teacher union representatives, PKB instructors, and *kelompok kerja guru* or KKG (teacher working group) representatives. Additionally, we conducted interviews with government officials at the national and district levels.

Based on our review of the literature (see Table 1), the findings regarding PKB's design space will be framed using a framework of Popova et al. (2018). Given the close-knit importance between design space and context specificity, the framework's attributes are contextually relevant to Indonesia's case. In any case, the framework we use contains similarities with other frameworks. Therefore, our findings are robust to any of these frameworks.

Table 1. Features of Effective Teacher Professional Development

Features		Literature				
		Desimone, 2009	Borko, Jacobs and Koellner, 2010	van Veen, Zwar and Meirink, 2012	Darling-Hammond, Hyler and Gardner, 2017	Popova et al., 2018
Content		Content-focused	• Situated in practice • Focuses on student learning	• Subject-matter oriented • Addresses teachers' daily experiences and beliefs	Focuses on the content teachers teach	• Subject-focused • Linked to teachers' daily experiences and activities
Process/ Structure	**Learning Principle**	• Adopts active-learning principles • A platform for collective participation • Interactive feedback and discussion	• Active-learning; engages discussions • Builds professional learning community • Artifacts of practice to bring the classroom to the TPD setting	• Active- and inquiry-based learning oriented • Participation in learning community	• Adopts adult-learning principle • Endorses active-learning, platform for collaboration • Feedback and reflection; uses of models and modelling	• Depends on teachers' teaching experience • Lesson enactment/ teaching practice
	Follow-up	-	Cycle of teaching exercise and reflection; continuous, on-going and with follow-ups	Organises follow-up meetings regularly	Coaching and expert support	Follow-up visits
	Location	-	School-based and offsite	-	-	Not in a centralized location
	Duration	Sustained duration	Sustainable over time	Long-term duration	Sustained duration	-
Link to System		Content is consistent with school, district, and state reforms and policies	Promotes coherence with state standard	Content is consistent with school, district, and state reforms and policies	Coherent with the professional continuum; linked to teaching evaluation	Linked to career opportunities

To examine whether the Indonesian education system is coherent around teacher quality, we use the accountability framework proposed by Pritchett (2015), shown in Figure 1. The framework identifies four main stakeholders in an education system: citizens (parents, students), the state, organisations, and frontline providers. For each pair of stakeholders, one is the principal and the other is the agent. The accountability relationship between the principal and the agent revolves around four aspects: delegation, finance, information, and motivation. The first aspect is the most important; without delegation, the condition in the other three aspects is unlikely to be sufficient. Finance and information must follow delegation, in a sense that a delegation must be followed by sufficient financial resources. And then, information must be collected to evaluate whether the delegation and finances are undertaken by the agent. Information is then used to motivate the agent to improve its performance. In Figure 1, the green arrows show these accountability relationships, going from the principal to the agent.

Figure 1. Education System Accountability Framework
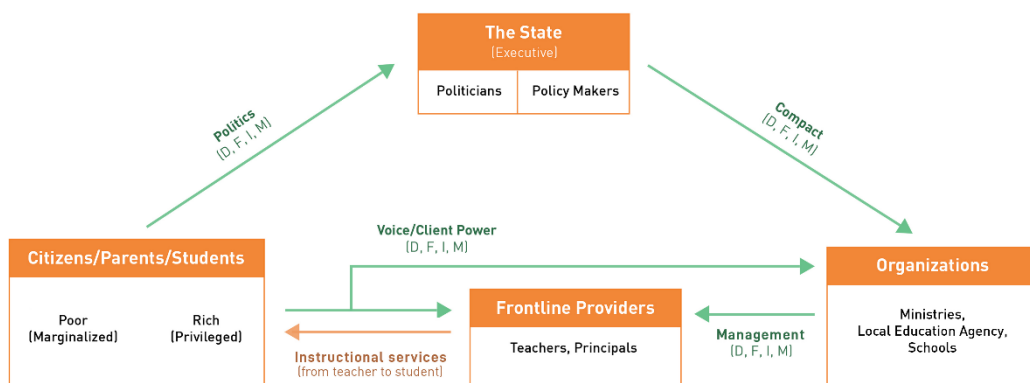
3. Country Context

Indonesia began its TPD activities in the 1970s. The first TPD programme in Indonesia was conducted to support the rapid opening of primary schools during the New Order era.[1] The TPD took the form of a 3-week workshop and aimed to equip new primary school teachers, mostly secondary school graduates without teacher training experience, and had only basic teaching skills. Using the cascade method, the workshop produced 1,200 national instructors

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[1] Between 1973 and 1978, the government constructed more than 60,000 primary schools throughout the country (Duflo, 2001).

and trained 90,000 teachers as of 1976 (Soedijarto in Thair and Treagust, 2003). Since then, TPD programmes in the country have gone through changes to accommodate the national education agenda's numerous reformulations (Rahman, 2016; Thair and Treagust, 2003).

Following the 1975 curriculum reform that promoted student-centred learning, the government launched the *Pemantapan Kerja Guru* or PKG (Strengthening the Work of Teachers) programme in 1980. Different to TPD programmes in the 1970s, PKG started small. In each province, PKG was only conducted twice a year and targeted fifty participants per training. The trainings were facilitated by master trainers previously sent to study the student-centred learning approach in overseas learning centres or universities. PKG was scheduled for 16 weeks and delivered in two modes: two cycles of 2-week in-service training and two cycles of 2-week on-the-job training. The first cycle of the in-service training was residential, which comprised the following elements: lesson planning activity, student worksheet development, lectures on subject knowledge, microteaching, lesson demonstration by the master teachers, and peer teaching. During the on-the-job training, PKG instructors visited individual teacher classrooms, provided feedback for the observed practice, and held weekly meetings to discuss the teacher's problems in enacting the active learning principles.

In 1982, to disseminate the PKG methodology rapidly but at a lower cost, the government established a shorter PKG, named *Sanggar* PKG. The modified PKG only had one cycle of 1-week non-residential in-service training. Each participating teacher had three classroom visits from the instructors who were alumni of the PKG programme. As of 1988, *Sanggar* PKG had been conducted in over 200 Indonesian districts. The changes made to the original PKG delivery, however, were reported to result in the loss of quality and intensity of training (Somerset, 1988).

As donor funding for *Sanggar* PKG ended in 1993, the government launched KKG, a new model to facilitate teachers' professional learning in a school cluster system. The KKG was initiated under the Primary Education Quality Improvement Project (PEQIP), supported by the World Bank (van der Werf et al., 2000). Each school cluster in KKG included one core school and six to nine other schools. The common activities in KKG ranged from developing lesson plans, designing test items to attending lectures provided by both internal and external facilitators.

Following the issuance of Teachers and Lecturers Law in 2005, the Indonesian government then linked TPD with the Teacher Certification programme that comes with a professional allowance, essentially doubling teachers' salary. The said TPD programme, *Pendidikan dan*

Latihan Profesi Guru or PLPG (Education and Training for the Teaching Profession), consisted of 90 hours of in-service training (Rahman, 2016) in the form of lectures and workshops. The PLPG training was conducted in a centralised location for ten days and included the lesson enactment component as part of the certification requirement. However, there was no further supervision of the certified teachers returning to schools.

Overall, despite several reforms of the TPD design, there is no observable improvement in the teaching workforce quality. Certified teachers continue to show limited subject matter knowledge and inadequate pedagogical skills (World Bank, 2015). The latest Programme for International Student Assessment (PISA) data shows that Indonesian students perform poorly; their reading literacy in 2018 was at the same level as in 2000 (OECD, 2019). Furthermore, Beatty et al. (2018) revealed that Indonesian children's basic arithmetic skills declined between 2000 and 2014.

Moreover, while a more favourable TPD approach that follows the cluster-based model has been successfully implemented, among others, in South Korea and Japan (Mullis et al., 2016), KKG activities have been dysfunctional for years in many parts of Indonesia (Chang et al., 2014). Chang et al. (2014) pointed to some contributing factors, including the lack of institutional and financial support from local governments and low teacher motivation. This shows that simply changing the TPD model with an entirely new design without addressing systemic issues in the education system will not lead to the desired improvement. A summary of the evolution of TPD programmes in Indonesia is presented in Table 2.

Table 2. The Evolution of Teacher Professional Development Programmes in Indonesia

Aspects	Studies Related to TPD					
	INPRES **(Thair and Treagust, 2003)**	**PKG** **(Thair and Treagust, 2003)**	**Sanggar PKG** **(Thair and Treagust, 2003)**	**KKG/MGMP** **(van der Werf et al., 2000; Chang et al., 2014)**	**PLPG** **(Jalal et al., 2009; World Bank, 2015)**	**PKB** **(Tamzil et al., 2019; the present study)**
First implemented	In the 1970s	In 1980	In 1982	In 1993	In 2007	**2013 (with changes following the 2015 UKG)**
Focus	To equip new primary school teachers without teacher training experience	To support secondary school teachers in applying student-centred learning approach	To scale-up PKG's implementation to district-level	To facilitate professional learning for teachers in school cluster system	(i) Remedial programme for teachers who did not pass the Teacher Certification programme. (ii) Starting from 2010, all teachers must attend PLPG to be certified	(i) Remedial programme for teachers with low UKG scores (ii) TPD activities to earn credit points for civil servant promotion
Duration and Forms	3 weeks of in-service training	16 weeks (two cycles of 2-week in-service training and 2-week classroom visits)	1 week of in-service training	One day every month	90 hours of in-service training	60 hours of in service training, self-directed development, action research
TPD model	Standardised programme with cascade model at the national, provincial, and district levels	Standardised programme with instructors at the provincial level	Standardised programme with cascade model at the national, provincial, and district levels	Clustered, in-site community of practice	Standardised programme with instructors at the provincial level	Standardised programme with cascade model at the national, provincial, and district levels

Aspects	Studies Related to TPD					
	INPRES (Thair and Treagust, 2003)	PKG (Thair and Treagust, 2003)	Sanggar PKG (Thair and Treagust, 2003)	KKG/MGMP (van der Werf et al., 2000; Chang et al., 2014)	PLPG (Jalal et al., 2009; World Bank, 2015)	PKB (Tamzil et al., 2019; the present study)
Scale	Large-scale; targeted 600,000 primary school teachers (managed to reach 90,000 teachers by 1976)	Small scale; 50 teachers per province per semester	Large scale; targeted mathematics and science teachers in 200 districts	Large-scale; roughly 267.000 teachers participated in 6,155 working groups in 45 districts in 2010	Large-scale; targeted over 100,000 teachers who failed the teacher certification in 2007; targeted 2.7 million teachers to be certified in 2015	Large-scale; targeting 1.3 million teachers who failed the UKG
Characteristics of effective TPD (Popova et al., 2018)						
Linked to teacher incentives	Not linked to teacher incentives				Completion of PLPG linked to Teacher Certification allowance	Completion of PKB linked to civil servant credit point system
Subject-focused	Targeted primary school teachers	Targeted secondary school mathematics and science teachers		Programmes are streamlined for primary school teachers and teachers at various secondary school subjects		
Targeting TPD based on teaching experience	No differentiation for novice or experienced teachers					
Linking to teachers' everyday experience	Prepared teachers to master basic teaching skills	Aimed to improve teachers' teaching practice	Aimed to improve teachers' teaching practice	Developed lesson plan and question banks for examination	Not linked to teachers' classroom practice	

Aspects	Studies Related to TPD					
	INPRES (Thair and Treagust, 2003)	PKG (Thair and Treagust, 2003)	Sanggar PKG (Thair and Treagust, 2003)	KKG/MGMP (van der Werf et al., 2000; Chang et al., 2014)	PLPG (Jalal et al., 2009; World Bank, 2015)	PKB (Tamzil et al., 2019; the present study)
Involving teaching practice activity	No teaching practice activity	2-cycle of 2-week lesson observation by PKG instructors	Up to three classroom visits by instructors	No teaching practice activity	Peer-teaching as part of the PLPG final assessment	No teaching practice activity
Follow-up visits	No follow-up activity	On-service visits by PKG assistant instructors	No follow-up activity			
Training location	Centralised (at the national and provincial training sites)	Centralised (at the provincial training sites)	Less centralised (at schools or sub-district multipurpose hall)	Less centralised (at schools or sub-district multipurpose hall)	Centralised (at the district-level training sites)	Less centralised (at schools or sub-district multipurpose hall)
Lesson Learned						
Response to previous TPD programme	-	PKG started small; provided feedback for teaching practice; sustained duration.	Sanggar PKG aimed at disseminating or scaling up the PKG	Cluster-based TPD; addressed the drawback of short training in Sanggar PKG	PLPG addressed the needs of a more structured training on pedagogy and subject matter that was missing in KKG	• PKB takes the form of in-service training, collaborative work in the KKG, writes research report, and self-directed development • Module selection in PKB are based on teacher baseline score in UKG; teacher improvement is based on endline score in the same test

Aspects	Studies Related to TPD					
	INPRES (Thair and Treagust, 2003)	PKG (Thair and Treagust, 2003)	Sanggar PKG (Thair and Treagust, 2003)	KKG/MGMP (van der Werf et al., 2000; Chang et al., 2014)	PLPG (Jalal et al., 2009; World Bank, 2015)	PKB (Tamzil et al., 2019; the present study)
Unfavourable feature of TPD that (re) appeared	-	-	Cascade methods through short in-service training (similar to the INPRES)	Component of lesson observation and follow-ups to individual teacher (as in PKG) were missing in KKG	Short in-service training; lesson enactment through peer teaching was only for the purpose of completing PLPG; no follow-ups	• Cascade methods through short in-service training (similar to the INPRES and Sanggar PKG) • Component of lesson observation and follow-ups are missing in PKB

Aspects	Studies Related to TPD					
	INPRES (Thair and Treagust, 2003)	PKG (Thair and Treagust, 2003)	Sanggar PKG (Thair and Treagust, 2003)	KKG/MGMP (van der Werf et al., 2000; Chang et al., 2014)	PLPG (Jalal et al., 2009; World Bank, 2015)	PKB (Tamzil et al., 2019; the present study)
Systemic issues in TPD implementation	The opening of thousands new primary schools required training at a rapid pace using cascading methods	Underfunded programmes and lacked of integration between TPD and teacher career development affected the sustainability of the programmes beyond the project life cycle		• Lacked support from local governments (in terms of funding and reinforcement) to implement TPD activities • KKG activities focused on developing materials to comply with government programmes, e.g., questions banks for preparing students' standardised exams, or lesson plan collection for school accreditation purpose and less on facilitating teacher learning	• Teacher participation in PLPG was based on seniority rather than merit • Certified teachers continued to receive allowance equal to their base salary until they reach retirement age, as long as they met the 24-hour teaching slot; no evaluation or re-certification process	• Linking PKB with civil servant credit point is regarded as punishment for low-skilled teachers rather than reward for excellent performers • No consequences for teachers who failed PKB • No transparency on teacher scores in PKB modules • Teacher participation in PKB is based on seniority rather than merit • PKB is underfunded; local governments were not involved in TPD policy-making, thus show weak commitment in supporting TPD programmes • Teachers in many districts have to self-fund the training

Aspects	Studies Related to TPD					
	INPRES (Thair and Treagust, 2003)	PKG (Thair and Treagust, 2003)	Sanggar PKG (Thair and Treagust, 2003)	KKG/MGMP (van der Werf et al., 2000; Chang et al., 2014)	PLPG (Jalal et al., 2009; World Bank, 2015)	PKB (Tamzil et al., 2019; the present study)
What the TPD achieved	-	Scaling up the PKG into Sanggar PKG with cascading method in short time were reported to result in the loss of quality and intensity of training		KKGs in many districts were no longer active	Certified teacher continued to show limited pedagogical and subject matter knowledge	• The focus of PKB is to train as many low-scored teachers as possible, not to improve individual teacher's lack of competence • There are no significant changes made by PKB teachers upon returning to schools

In the following section, we describe the PKB programme's design and implementation. We also discuss the changes made in PKB in comparison to previous TPDs, as well as the unfavourable characteristics of TPD (in PKB) that persist for decades.

4. The Efficacy of the PKB Programme

Compared to previous TPD initiatives in Indonesia, the PKB programme includes two substantial changes. First, PKB aims to offer learning opportunities for teachers through a wide range of activities. PKB takes the form of in-service training, collaborative work in the KKG, writing a research report, and self-directed development to produce innovative work. The PKB programme comprises 60 hours of in-class training and on-the-job training. Previous TPD programmes in Indonesia only focused on one activity.

Second, following the 2015 UKG, which measured teachers' subject matter knowledge and general pedagogical knowledge, the PKB programme is linked to the individual teacher score on UKG. The PKB programme attempts to provide teachers with the specific knowledge and skills they were deemed lacking. By design, teachers are required to complete the training modules offered in PKB consistent with the aspect where they scored low on the test. Upon completion of the PKB training, teachers must take the same test to measure their improvement. The success of PKB implementation is measured by the improvement in a teacher's score in the post-training assessment. Thus, PKB assumes that teachers with more knowledge about teaching will score higher on the competence test and, in turn, become more effective instructors. Previous TPD initiatives were provided based on a general standard for all participants rather than on individual teacher's baseline learning levels.

However, note that the MoEC does not provide teachers with their UKG test scores. The teachers only see their performance in each module based on colour: red (fail) or green (pass). In the largest UKG held in 2015, 1.3 million of 1.6 million teachers who took the test scored below the minimum standard set by the MoEC. The minimum passing grade was 55 out of 100. The national average score of UKG in 2015 was 39. These millions of teachers would need to undergo PKB.

4.1. TPD Model in the PKB Programme

As is the case of government-run TPD in many developing countries, PKB is a top-down programme. The MoEC authorises PKB instructors to deliver a package of knowledge and

skills to teachers, focusing on what the teachers were lacking.[2] The main issue with the top-down nature of a TPD programme is the framing that teacher learning is a set of mandatory activities and obligations (Little, 1993). Teachers participated in PKB because they were required to, as a consequence of their low performance on the UKG. Our interviews with participant teachers revealed that teachers, indeed, considered the certificate they earned from completing the training to be much more important than the learning itself. A teacher commented, "Well, can you imagine? It has been almost one year [from the completion of training] and we have not received any certificate. It is just the same as not getting anything. Just a waste of time."[3] The unsettled matter regarding certificate has discouraged and disappointed teachers who have completed the 60-hour module.

In the PKB action research and innovative work activities, the set of outputs required by the MoEC focus on completing research reports. According to PKB technical guidelines, research outputs should be in a publishable form, including for publication in a scientific journal. In contrast, inquiry based professional development activities, such as action research, focus on analysing one's teaching, students' learning, and classroom practices (Phelps, 2005).

Little (1993, p.141) suggested that in analysing an effective TPD programme, we should not focus on whether it is a voluntary or mandatory programme. Instead, it should include "careful consideration of teachers' professional obligations and opportunities, of the balance and tension between individual latitude and collective endeavours, and of the resources and rewards devoted to each". Following this line of thought, the rest of this section examines whether the characteristics of an effective TPD are in the PKB programme.

4.2. The Characteristics of Effective TPD in the PKB Programme

Linking TPD participation to teacher incentives. Popova et al. (2018) showed that in TPD programmes where participation has no implications for promotion, salary, or status increases, student learning is lower. Their results corroborate the work of Ingvarson (1998) who suggested that without incentives, training may not have a meaningful impact.

Completing each PKB activity would earn teachers certain credit points required for promotion to a higher civil service grade rank. The promotion comes with a salary increase.

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[2] *Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan* or PPPPTK (The Centre for Teacher and Education Personnel Development and Empowerment) is a national government institution responsible to train the master teachers in the PKB training. There is a specific centre for each subject (e.g., PPPPTK Mathematics, PPPPTK Science, and PPPPTK Language).

[3] Interview with a male teacher, Kebumen, September 2018.

In comparison with previous TPD initiatives in Indonesia, such as the PKG in the 1980s that did not incorporate TPD participation into the government policy on career development, the PKB system is an improvement. Several teachers we interviewed admitted that the linkage between PKB participation and civil servant promotion was one of the key reasons they took part in PKB activities.

The fact that teachers value the PKB certificates much more than the learning, however, shows that their main intention was to earn the credit points. Acquiring new knowledge from the training is not considered important. Yet, teachers believe that the credit points earned in training activities are insufficient. "It is almost pointless, earning one point is nothing for the 60-hour training you have participated. And, if you fail the post-training assessment, you only earn 0.1 points".[4]

Moreover, according to Sagala (2017), Indonesian teachers and education society at large generally perceive the UKG and PKB systems as a punishment rather than as a reward system. The author described how Indonesia's largest teacher union tried to lobby the national parliament to cancel the implementation of UKG and the reform on civil service teacher's promotion system that includes the credit point scheme.[5] This attempt was provoked by rumours about the issuance of a new government policy to stop teacher certification allowance, following the poor performance on the 2015 UKG. The rumour was based on recommendations from previous studies providing policy options to link teacher certification (and the certification allowance) to passing minimum levels of teacher subject-matter proficiency (e.g., World Bank, 2015).

The union vehemently opposed the policy option because Indonesia government officers, including teachers, are traditionally promoted based on the length of year of service, not on performance. The policy option threatened the status quo. The strong legacy of seniority-based civil servant promotion system since the New Order era caused the recent reform that include a credit point scheme earned from participating in TPD activities to be intimidating and seen as a punishment to teachers' low competence rather than as a method to motivate better performance.

While the policy that links teacher certification to passing minimum levels of teacher subject-matter proficiency had never been realized, it drove teachers to participate in the PKB training. In Gorontalo, among thousands of certified low-scoring teachers, the main reason

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[4] Interview with a female teacher, Yogyakarta, September 2018.

[5] All civil servant teachers automatically become members of *Persatuan Guru Republik Indonesia* or PGRI (Teachers Association of the Republic of Indonesia). As such, PGRI is the largest teacher union in the country.

to participate in PKB and to self-finance their training was their worry that the policy would be enacted. Thus, they were keen to participate in the training so they could improve their scores and, thus, continue receiving the allowance.

Subject-focused. According to Popova et al. (2018), programmes with a specific subject focus result in higher learning gains than more general programmes. Specifically, programmes with no subject focus show lower impact on student learning.

The PKB training is subject-focused. For primary school teachers, different modules on both subject matter and pedagogical knowledge are offered for teachers teaching lower grades (Grades 1 to 3) and upper grades (Grades 4 to 6). In each group, there are ten modules offered. Each module covers a combination of a subject matter and a pedagogy topic. The subject matters covered in the ten modules include mathematics, language, natural science, social science, civic education, and information and communication technology (ICT). Topics include the general theory of teaching and learning, curriculum studies, the principles of education evaluation, effective teaching, student-centred methodology, and reflective practice. For instance, one module combines content related to primary school level mathematics and general theory about teaching and learning. This combination of both subject matter and general pedagogical knowledge in a module, nevertheless, confused the participants. In the post-training test, when a teacher was informed that she failed a module, she was not sure whether it was due to her low score on the pedagogical knowledge section or on the subject matter section. Since teachers do not have access to their UKG scores, they do not know why they receive the scores they do.

Teachers also found the duration of PKB training was inadequate, as said by a participant, "The training's materials were very important, but we were constrained by the short duration when there were actually so many materials to cover".[6] Participants perceived that they did not have the time to study the entire module. One participant added, "We divided the tasks among participants to do different parts of the module because there were just too many basic competences that we had to learn in a short time."[7] Similar to participant teachers, a PKB instructor also said the duration of the training was insufficient, "[We only had] 60 hours, with 2–3 days of in-service days for a module consisted of 200 pages."[8]

Another criticism expressed by interviewees was about the capacity of the people who taught the workshops. Our findings in multiple sites showed that the PKB instructors, many of whom

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[6] Interview with a female senior teacher, Yogyakarta, September 2018.

[7] Interview with a female teacher, Kebumen, September 2018.

[8] Interview with a male PKB instructor, Gorontalo, September 2018.

are university lecturers or selected teachers, have insufficient expertise in their field or in pedagogical skills. Most, if not all, primary school teachers and university lecturers at Primary School Teacher Education (*Pendidikan Guru Sekolah Dasar* or PGSD) are generalists. During their education and training, the instructors might have never received specific training to master certain subjects, such as mathematics or science. Yet, they are required to demonstrate basic proficiency in all of the subjects taught in primary schools, including mathematics, language, natural science, social science, civic education, and arts.

Overall, the teacher participants had difficulty comprehending the PKB modules. Even teachers who attended all of the in-service days and had the time to learn the module individually during the on-job training session still found the material incomprehensible. Even worse, some materials in the post-test were not covered in the module. Thus, teachers could not improve their scores.

Targeting TPD based on teaching experience. To support teacher learning, it is important to understand where teachers are in their careers. Day (1997, p.42) suggested that "professional development must take account of where teachers are in their lives and careers". Putnam and Borko (2000) showed how various forms of TPD benefit the less-experience and experienced teachers in a different manner. Similarly, Popova et al. (2018) argued that targeting participant teachers by their years of experience has a robust association with student learning.

PKB was not designed to consider a teacher's level of experience or skills. Our data show that the majority of PKB participants in 2017 had over ten years of teaching experience. Many teachers were within five years from retirement. Experienced teachers considered the training material to be "refreshers" rather than new or updated knowledge. Some older teachers said that they had learnt about the materials as college students. According to teachers in Kebumen, the training material was too general. They had expected to learn about more strategies to help them teaching certain concepts more effectively.

An instructor in Gorontalo revealed that most senior teachers did not show much enthusiasm or commitment to the training. They often copied assignments from younger participants. They were occasionally absent during the in-service training days. Unsurprisingly, many of them failed the post-training assessment. From our perspective, these are logical outcomes of a programme that does not tailor its content to the participants' needs.

While we did not obtain direct evidence, we assume that the participant selection for PKB was a negotiated process. Not all teachers who failed a module were guaranteed seats. Note that in Gorontalo, only certified teachers who were willing to self-finance their training could

register for the modules. According to KKG representatives in our study locations, a teacher's participation in TPD activities has always been based on seniority. Senior teachers will be given priority to take a seat in all government-run TPD programmes.

In fact, module and participant selection in PKB are complicated. In general, the district government chose the modules that the highest numbers of teachers failed. They then invited KKG leaders to select the participants until the quotas were filled. Teachers who failed the modules but were not chosen by the district government would have to wait for the next cycle. Also, some teachers who were chosen to participate actually did not fail the modules that were offered. Yet, they were selected to participate due to seniority.

Linking to teachers' everyday experience. Popova et al. (2018) showed that building on what teachers already do and linking to their everyday experiences have positive effects on student learning.

PKB teachers in the three districts thought that the training materials developed by the MoEC were too theoretical, not truly relevant to their practice. During the face-to-face training, the two-to-three full days of intensive workshop included some lecture, content-focused coaching activities, and both individual and group assignments. The training activities did not elicit teachers' opinions or ideas. On the other hand, teachers would like to receive training to help them address their lack of mastery in subject matter and pedagogical skills that could help them improve their classroom instruction. A teacher commented, "We valued the methods more than the theory. We wanted to discuss our experiences in our own classrooms and learn new methods so we can change our teaching to be more effective."[9] The active learning component that effective TPD programmes have does not exist in PKB.

This finding, to a greater extent, reflects what van der Werf et al. (2000) documented, that what Indonesian teachers learned in the PEQIP in-service training was disconnected from their daily practice. And the aims of the training may have been unrealistic considering their actual practice in classrooms. The problems discussed by van der Werf et al. (2000), unfortunately, persist after several attempts to reform TPD in recent decades.

Involving teaching practice through lesson enactment. Opportunities for teachers to engage in active learning, such as observing expert teachers or being observed, followed by interactive feedback and discussions, enhance the effectiveness of professional development (Desimone, 2009). According to Popova et al. (2018), a TPD programme that involves teaching practice through lesson enactment is associated with an increase in student

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[9] Focus group discussion with teachers, Kebumen, September 2018.

learning. The proportion of training time spent practicing with other teachers is highly correlated with learning impacts.

In the PKB training, there is no component that involves teaching practice through lesson enactment. In the final training session, teachers are required to present their work on the assignments from the module, and the instructor provides feedback. However, no component of peer teaching is included.

Simplification of PKG in Indonesia in 1982 minimised the teaching practice component in the TPD activities, which resulted in a lowering of quality of the training. Other studies of effective in-service professional development programmes have shown that an element of coaching or demonstration in the teacher practice has a positive effect on the change of teacher teaching behaviour (Joyce and Showers, 1995). Therefore, the absence of this component in the PKB activities is potentially interferes with the process of transferring new knowledge acquired in the training to actual classrooms.

Follow-up visit. Continuous feedback and follow-up visits from mentors are essential for post-training improvement (Darling-Hammond, Chung Wei and Andree, 2010). Popova et al. (2018) showed that follow-up visits to review or evaluate material taught in the training has a higher impact to learning outcomes compared to follow-up visits with monitoring purposes alone.

Unfortunately, follow-up activities after the training that encourage and support changes in teaching practices are almost non-existent at all of our research sites. A PKB instructor in Kebumen admitted that the instructors themselves cannot guarantee that changes in teaching practice will take place, as it is only a one-time training with limited class hours.

In PKB, there is no continuous support system that can monitor and evaluate the impact of the training to improve teaching practices. School principals, who should be supporting teacher learning through providing feedback on teacher instructional quality during the PKB on the job training sessions were found to only provide teachers with legal documents as part of PKB requirements. The school supervisor only carried out regular supervision, which means filling out paper forms.

Training Location. Popova et al. (2018) suggested that the location of TPD may influence programme effectiveness. Training held at centralised locations, such as hotels or conference rooms, appears to be less effective. Training held at a less centralised location, such as schools, universities, or training centres appears to be more effective. Wood and McQuarrie (1999) found that TPD programmes situated at schools are likely to be most

effective so that actual problems faced in the local environment can be raised, and teachers can receive feedback on actual teaching.

PKB activities for primary school teachers are normally held at schools selected by the KKG coordinator at the sub-district level. The site is usually well-equipped and located in a centralised location in the sub-district. Note that teacher's main goal in PKB training is to acquire the basic knowledge in subject matter, and the main method used to achieve the goal is doing exercises. Thus, teachers usually assemble in a large hall during a lecture session, and then are divided into smaller groups during assignments. Although PKB training is situated at schools, it does not discuss problems faced by teachers in the real classrooms as in the case of Wood and McQuarrie (1999).

4.3. Summary

In summary, we observe many differences between PKB and the successful TPD programmes reviewed by Popova et al. (2018). We did not observe much improvement in teacher's teaching practices after they completed PKB. This does not appear to stem from a lack of trying on the part of teachers. Most of the teachers in our research sites mentioned that they tried to incorporate what they learned in PKB into their lessons immediately upon completion of PKB training. However, various factors, including students' level of learning, curriculum demands, and limited facilities, caused teachers to resort to traditional teaching practices. Some teachers expressed disappointment after attending the training because the materials turned out to be inapplicable.

Students have mixed opinions regarding the change of teacher practice in their classrooms. For lower grade teachers (Grades 1–3) in Kebumen, after they implemented methods that were taught in the training, students looked happier in learning and were keener to attend school. Some upper grade students (Grades 4–6) in our study sites did not like their teacher's change in practice which they saw as superficial. For instance, a PKB participant teacher merely projected the digital version of the textbook onto the screen and then read it as an attempt to incorporate ICT in their mathematics teaching; the students preferred using the actual textbook.

Overall, in terms of design, unfavourable features in PKB have existed in previous TPDs as far back as two decades ago (e.g., Thair and Treagust, 2003; van der Werf et al., 2000). For instance, to train millions of low-scored teachers, PKB uses similar cascading methods applied in *Sanggar* PKG. The ineffectiveness of cascade model is perpetuated across generation of teachers. Although the implementation of the cascade model has been criticised for potentially affecting the training quality—because the materials may be diluted

as master trainers train other individuals as a trainer and so forth—this method is considered low-cost and can reach many teachers in a short time. When the objective of a programme is to ensure that as many teachers as possible pass a low-bar threshold, then the cascade model would be appropriate.

Moreover, while some features of effective TPD, e.g., linking the completion of TPD with credit points in civil servant system, was added to the PKB design, the incentives appear to be insignificant. The policy discussion in early 2015 to link PKB to certification, which carries a larger financial incentive, was not pursued by the government. The government shows lack of commitment to ensure a coherent system that motivates teachers to continuously improve their practice in the classroom.

In any case, our analysis above shows that the problems of TPD in Indonesia are rooted in the different elements of the education system level rather than in its design alone. In the following section, we examine the links between actors in the education system in terms of delegation, finance, information, and motivation. These links may explain why TPD in Indonesia has remained stuck for over four decades.

5. Education System Coherence and TPD Effectiveness

Our examination of PKB shows that the programme has some of the characteristics exhibited by effective TPD programmes elsewhere in the world but is missing others. The problems have existed for over four decades. In fact, analyses done around two decades ago have identified them. The question is, why have improvement efforts largely failed? One potential explanation is that because the Indonesian education system is incoherent when it comes to teacher quality. In an incoherent system, reforms and additional funding are unlikely to be successful (Pritchett, 2015).

5.1. Is the Indonesian Education System Coherent around Teacher Quality?

The state to central-level organisations. In Indonesia, the Compact is weak. The 2005 Teachers and Lecturers Law only states that a teacher must fulfil four competences (pedagogical, professional, social, and personality). But the descriptions are too broad. For example, one standard expects a teacher to develop content creatively. Moreover, no measurable standards specify what constitutes competence. The Law also ignores the fact that levels of competence exist. Thus, the Law sets competence goals without explicitly

defining what competence means or differentiating between basic, intermediate, and advanced competence levels.

The state provides financing only based on the constitutional mandate. Since the amount as a proportion of government budget is already high, the government is unlikely to invest more, even if there is an identified need. On the other hand, non-performance carries no consequences. Finally, the government evaluation system is mainly based on budget disbursement and process compliance. So, in the eyes of the parliament, when the government spends all the education budget, then the government has fulfilled its education obligations.

Because of resource constraints, PKB adopts the cascade model. Consequently, with this limitation, the training programmes were redesigned to accommodate the given budget and train as many teachers as possible. Inevitably, the quality of the training is also adjusted. Here, the MoEC's persistence to adopt the cascade model may be driven by the pressure to administer a teacher training program, a requirement suggested in the global literature for educational advancement. Nevertheless, the MoEC lacks the commitment to provide every teacher with the necessary resources to experience an impactful TPD, resulting in low-quality training targeting millions of teachers. As we point out above, this is because TPD has never been embedded in a system with a strong delegation of learning, and that needed high-skilled teachers to facilitate effective learning.

With non-existent delegation, it is not surprising that Indonesia's TPD system is ineffective. And as we note in the previous section, there is only one level of competence that teachers are required to meet: the basic minimum level. Even then, a large proportion of teachers fall below this level. In fact, the lack of delegation results in the MoEC to virtually halt financing for teacher quality improvement programmes. We discuss this further below.

The state to local government institutions. Formally, MoEC is the central government ministry responsible for ensuring teacher quality. In practice, however, MoEC delegates this responsibility to local governments. According to the local education agency officers in our study locations, the budget provided by the central government was far from adequate to finance PKB implementation.

With this limitation, the responsibility to provide financial supports for the low-scoring teachers to participate in PKB is transferred to the local government. Unsurprisingly, within five years of PKB implementation, only 20 out of 514 districts in Indonesia have formulated formal regulations on PKB activities—including its financial component (Kastawi, Yuliejantiningsih and Sunandar, 2017).

Although the average UKG scores for each district are publicly available, district governments with poor teacher performance do not take serious notice. Sagala (2017) explained that the local government's reluctance to support the implementation of UKG and PKB was rooted in the exclusion of local governments from any policies formulated at the national level. Local government offices were not consulted in the policymaking on teacher assessment and the TPD activities. On the other hand, they are required to provide the technical and financial supports for policy implementation. At the same time, outcomes for local government are the same whether or not education quality improved. All these circumstances have caused local governments to pay little attention to quality improvement activities, such as the TPD.

Organisations to frontline providers. In general, teachers in Indonesia have yet to make student learning their top priority. Teachers' objective to date is to comply with the national curriculum and other government policies and programmes. For many years, Indonesian teachers were rewarded for their obedience and loyalty rather than for their creativity or performance in delivering quality teaching (Bjork, 2005). Thus, when returning to schools upon completing a TPD programme, teachers resorted their previous practice. Thair and Treagust (2003) observed that although the earlier PKG system was considered successful, some teachers reverted to traditional didactic practice following the completion of this training.

Moreover, the current professional standards for teachers set by the MoEC cover academic and competence standards.[10] The academic standard is that teachers must have at least a bachelor's degree. The other standards, while comprehensive, are less measurable.

In the absence of a strong delegation to deliver quality education, organisations and frontline providers obviously cannot establish clear standards for what matters—such as providing effective TPD so that teachers can improve their teaching effectiveness—and what does not. Hence, as long as the system does not focus on learning, the "thin" input standards, such as having a bachelor's degree (compared to "thick" standard like competency-based performance), will be considered an adequate—though it is not—indicator of a professional teacher.

Teacher associations protested the use of these other competence standards adopted by the MoEC, arguing that the academic standard is sufficient proof of competence. According to Chang et al. (2014), most national parliament members sided with the associations. This political move diminished the delegation aspect in the accountability relationship.

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[10] The standards are set in *Peraturan Menteri Pendidikan dan Kebudayaan* or *Permendikbud* (Minister of Education and Culture Regulation) No. 16/2017 on Teacher Academic and Competence Standards.

The only observable effect of the standards is in the increase in the proportion of teachers with a bachelor's degree, from 20% in 2005 to 90% in 2018.[11] Subsequent studies, however, do not see evidence that teachers with a bachelor's degree perform better. They have higher absenteeism rates than teachers without a bachelor's degree (ACDP, 2014). And they provide the same value added to student learning (World Bank, 2015).

In their study of government-run TPD in Indonesia, Thair and Treagust (2003) underlined that Indonesian teachers have always been the focus of change, not the agents of change. Teachers' participation in TPD has always been an assignment from the government. Schools lack the capacity to develop teachers. As Bjork (2006, p.144) says, "Indonesian educators are not likely to have significant experience with democratically managed institutions; nor can they be expected to be familiar with schools that regularly include teachers [and parents] in making important decisions". This contrasts with Little's (1993, p.139) suggestion that effective professional development governance should ensure "bureaucratic restraint and a balance between the interests of individuals and the interests of institutions".

Another issue is the lack of support for teachers to participate in TPD. In Indonesia, teacher certification is based on seniority rather than meritocracy. Teachers with more years of experience are given priority for any government-run TPD programmes. While the training to equip teachers with basic mastery of subject matter and pedagogical knowledge may be more suitable for less-experienced teachers, they have fewer opportunities to participate in such training.

In the public school system, outcomes for schools and teachers are the same, whether or not teacher and students perform well. The teachers' lack of improvement in terms of their scores on post-training assessments and changes in teaching practice following their participation in PKB carry no consequences. The MoEC has not integrated teacher professional learning into school improvement initiatives, such as linking TPD with student learning outcomes. Outcomes that are evaluated based on compliance with bureaucratic processes have caused school principal and teachers to practice business as usual, despite students' poor learning.

Parents to schools or teachers. In public schools, parents do not often make demands about the quality delivery of their child education. Due to the high rate of teacher absenteeism in the past (Usman, Akhmadi and Suryadarma, 2004), what matters to parents is often simply teachers' presence in the classroom. In rural areas, parents often have low education

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[11] The 2005 data are from Chang et al. (2014); the 2018 data are from Statistics Indonesia (2019).

attainment and perceive teachers as more knowledgeable about their children's education. As such, parents lack agency. Moreover, education at primary and secondary schools is free. With the abolition of school fees, both schools and parents perceive that the accountability mechanism from parents as a client was significantly weakened (Nihayah, Revina and Usman, 2020).

Suratno (2012) demonstrated that in a school system where parents as a client have more power, such as that in the private school system, a collaborative TPD programme can be effectively implemented. Suratno (2012) described how the teachers in a private school in Jakarta collaboratively worked and exchanged their narratives of teaching practices during a school-based TPD. In a private school, parents financed the school operation. Individual teachers usually received feedback from students or parents on their teaching performance at least once every semester. Parents' demands for quality of teaching, thus, encouraged the school and the teachers to deliver high-quality education, which resulted in a collective action to continuously improve teachers' instructional practices. The situative model of TPD enhanced teacher quality and, thus, added value to the school's reputation and increased parents' confidence in their children's education. In public schools, teachers have limited awareness on the relevance of participating in effective TPD activities or delivering quality instructions towards the development of their careers or towards the establishment of their school.

Finally, in the public school system, parents have no formal information about teacher instructional practice. While the information related to individual teacher performance, such as teacher's UKG scores, could be made available to parents, such information is often hidden by principals or education offices. It is seen by our informants as potentially bringing embarrassment to teachers. The low-scoring teachers may lose face in the eyes of parents due to their poor performance in the test. A teacher union representative commented, "If a teacher scored low on the [teacher] assessment, and parents heard about this, parents would lose their confidence in the teacher. The teachers would lose their face [in front of parents]."

In summary, the over four decades of ineffective TPD phenomenon, which chronically emerges, is a foreseeable outcome of a system that does not include learning as its primary focus. In all of the accountability relationships we examined, aspects of delegation, financing, and information are largely missing. In such an incoherent system, the existence of high-quality teachers is merely a coincidence rather than an intended outcome.

5.2. Building a Coherent System that Renders the TPD Effective

We found that Indonesia's education system is incoherent around teacher quality. The state does not provide strong delegation to the MoEC on the importance of producing high-quality teachers. The government only requires teachers to meet the basic minimum level. There is no demand from the MoEC or parents for teachers to develop advanced skills to facilitate effective learning. Moreover, the TPD is underfunded. This lack of financial support greatly contributes to the ineffectiveness of the TPD programme. In any case, outcomes for the frontline providers are evaluated based on compliance towards bureaucratic processes rather than on student learning progress. These environments have caused teachers to have low awareness of the relevance of improving their quality through participating in effective TPD activities.

To reorient the system to produce high-quality teachers, therefore, the following changes on the current policies on teachers are crucial. The reform should start with a stronger delegation from the state to organisations that focus on teacher quality. The performance standards of teachers need to be amended. In the revised regulations on teacher's qualification, it is important to set more measurable and comprehensible standards that constitute competence. Also, setting different expectations for graduate, novice, and experienced teachers is necessary. The existence of such standards can be valuable to guide the establishment of continuous professional development programmes that can facilitate teacher's learning more effectively. Goe, Biggers and Croft (2012) suggested that developing a clear and high-quality teaching standard is the first important step to create a comprehensive teacher evaluation system that can be effectively used for professional development. The standards will form the basis for the development of different measure of teacher performance as well as standards and tools of effective training. The standards also provide a diagnostic approach to understanding which areas are not being met by teachers and considering how they might relate to student outcomes. It offers a set of criteria to help principals and others identify areas in which teachers are successful and areas for improvement.

The government should also implement performance-based systems for schools and teachers. The principle should be that higher-performing or more effective teachers must receive higher remuneration and promotion than teachers of more senior levels. There should be a mechanism to reward highly skilled teachers and upgrade low-skilled teachers who do not meet the minimum standards. There should also be a minimum competence achieved by a teacher to receive the allowance associated with the certification. Periodic re-certification could be considered. Thus, teachers would be motivated to continuously improve their skills.

As Darling-Hammond, Hyler and Gardner (2017, p.24) underlined, to ensure a coherent system that supports teachers across the entire professional continuum, professional learning should link to teaching standards and evaluation, and it should also "bridge to leadership opportunities to ensure a comprehensive system focused on the growth and development of teachers".

6. Conclusion

Indonesia has grappled with ineffective teacher professional development for over four decades. In this paper, we highlight how the latest iteration, the PKB, has failed to improve teacher skills and teaching practices. Our findings indicate that on paper, PKB has several features of an effective TPD programme mentioned in the literature. The PKB programme links TPD participation to the teacher incentive system. It is subject-focused. It is held in less-central locations.

Nevertheless, there is a large gap between what PKB looks like on paper and how it is implemented. Among other things, the technical shortcomings include the insufficient capacity of the instructors, poorly designed modules, and inadequate duration.

More importantly, other essential features of effective TPD were not found in PKB. The PKB programme has not targeted teachers based on years of experience, has not followed up teachers with post-training activities, has not incorporated teaching practice through lesson enactment, and has not built upon the existing teacher practice. Given the differences between the characteristics of PKB and the characteristics of successful TPD programmes described in the literature, it is unsurprising that we did not observe significant improvement in teachers' instructional practices after they completed PKB.

Indonesia's experience indicates that the country's long-term problems of ineffective TPD are driven by the incoherency of the education system's elements. This is beyond the technical and operational elements of the TPD. In principle, to build a coherent system that makes TPD effective there should be a stronger delegation that focus on learning. More importantly, there should be a mechanism to reward highly skilled teachers and upgrade low-skilled teachers who do not meet the minimum standards. Thus, teachers would be motivated to improve their skills continuously through effective TPD.

Finally, a reconceptualization of TPD programmes in Indonesia, or in any similar context, should focus on providing an environment and a system that matches teachers' and schools'

motivation and capabilities. The TPD programme must provide teachers with a sense of independence in their own learning and in teaching. This type of reform will go against the norms that ordered Indonesian government system for decades (Bjork, 2006), and, thus, points out the insufficiency of merely improving technical matters of TPD in any future reform. As shown in this study, TPD reforms that substantially addressed the previous TPD initiatives' problems, but are part of an incoherent education system, is inadequate to improve teaching effectiveness. The devils that led to the ineffectiveness of TPD in Indonesia are rooted in the disorganisation of its education system. The issues involved in providing effective TPD are more broadly than a matter of replacing the "old" with the "new"; the change requires the construction of the new foundations.

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