

READDRESSING TEACHER CHALLENGES: THE CASE OF INDONESIA

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***Abstract:** In an effort to address existing teacher policy challenges for Indonesia, certification is one core component that needs evaluation. Teacher certification which started in 2005 has generated some significant policy challenges which require urgent readdressing. To clarify on these existing challenges there is need for a comprehensive evaluation in order to generate feedback for the improvement of teacher training and management of a successful certification programme. It is important to know whether the follow up training and management reforms after certification are in line with the set teacher professional development objectives. This study uses the assumption that the teachers' professional competencies cannot improve unless they are being supported by a sustainable professional development initiative. This study attempts to come up with some alternative ideas on some relevant policy issues regarding in-service training and management of teachers toward an accountable and merit based teacher promotion and remuneration system.*

***Keywords:** Teacher policy, teacher challenges, teacher certification, training and management*

1. INTRODUCTION

Having observed evidence on the position of Indonesia in some international studies, the Minister of Education and Culture (AniesBaswedan, 2014) began his movement through a presentation titled: *Emergency of Indonesian Education* in front of regional education officials. This was a form of self criticism that brought to light the initial consciousness of the Minister on the very nature of problems faced by the education system in the country. This awareness served as a strong foundation for the search of better alternative policies by the concerned officials. It is then appropriate to say that the Minister started his impetus by expressing his belief that the teacher is a key factor in fostering excellence in the Indonesian education.

Improving teacher's Competence and performance is as such one of the greatest challenges in the promotion of excellence in the education system. Facing global competition, Indonesia needs a much better quality of education to boost its competitive

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power. The teacher is therefore the single most important actor in the improvement of education quality, and reforming teacher training institutions is the most needed investment. However, the improved quality of teacher training is by itself only a necessary condition but not yet sufficient. To achieve the sufficient condition, the quality of teacher competencies needs maintenance and updating in a sustainable manner. This is the reason why teacher management reforms have appeared as the second most important factor to suffice teacher professional development. Thus, teacher certification would be less successful unless reforms in teacher training and management work well.

In the near future, teacher training and management could be a single top prioritized policy through the three major strategic endeavors. They are: (1) to reform the teacher pre-service training system using global standards that apply to teacher colleges throughout the country; (2) to establish a merit based promotion, demotion and remuneration in a systemic continuing professional development system; and (3) to build an evidence based planning as well as merit based recruitment, deployment, remuneration and career development of teachers. This study was to put attention on readdressing policy challenges in teacher training and management to come up with some alternative ideas used for the establishment of the right measures of teacher professional development.

2. CONCEPTUAL AND ANALYTICAL FRAMEWORK

Studies in Indonesia and in many parts of the world have revealed that the teacher is the single most important factor in boosting excellence in education. On the *Teachers' National Day* of 2004, a recovery episode of the Indonesian teaching force was founded. The President of Indonesia declared that teaching is a profession just like law or medical practice. This gave the Indonesian Government vital impetus to take remarkable actions that gave birth to the *Law of Teachers and Lecturers No. 14/2005* and the *Government Regulation No. 15/2015* on "National Standards of Education." These two legislations constituted the foundation for restructuring the Indonesian teaching workforce into a state apparatus with roles altered and others different from the teachers' previous roles.

In the literature, teacher also is among the most vital factors that encourage high quality of teaching and the learning processes. Kim (2007), for example, suggests that: "The quality of education cannot exceed the quality of teachers." This has strengthened Fullan's proposition two decades ago, "Educational change is dependent on what teachers do and think ... it is as simple and complex as that" (Michael G. Fullan; 1991, p. 117). Fullan (1992) further suggests that: "Teachers have control over their classroom and they will be guided by their beliefs and prior experiences." This means that however rich the knowledge and belief held by researchers or policy makers that lie in education policies is, it will not enable teachers improve their teaching practices unless they hold the same understanding and beliefs.

A quality teacher makes a difference in student learning as a prime measure of education quality. The same is true as Talis (OECD, 2009) suggests: "The greatest variation in student learning outcomes lies in differences among individual teachers rather than among schools or countries." Better quality teachers have a great deal of competences that help them perform and make students learn better. The *Law of Teachers and Lecturers* suggests that to become a teacher, it is imperative for one to be academically qualified and professionally competent to play their role as a learning agent. The minimum qualification of teachers is a Bachelor's Degree or a Diploma IV relevant to their teaching tasks. Based on the Ministerial Decree No. 63/2006, "...as a professional teacher one should possess a certain level of competency that lies in four areas, i.e.: pedagogy, professionalism, personality, and social competencies. A certain degree of qualification and competence is required for teachers to perform better in teaching and improving student learning" (Fasli Jalal, 2006).

Since the time of declaration in 2004, Indonesia has attempted some efforts to enhance teacher competency and performance. More than US\$ 6.2 Billion in budget allocation has been earmarked for certified teachers to receive doubled monthly salaries. In addition, the Government has allocated some US\$ 1.8 Billion for school operational grants to schools each year to procure teaching aids, transport expenses, and additional salary to help teachers teach better (APBN, 2009-2014). This is one of the huge public expenditures that the Minister of Finance once remarked that they might 'rob' the national budget as she expressed doubt whether the investment would yield the proposed results.

After more than a decade of implementation, one wonders if certification has made any improvement in teaching performance. There is need for a clear account whether the certification has been able to help teachers improve their teaching performance. Therefore, the Ministry of Education has a challenge to carry out a nation wide evaluation to prove the extent to which the certification has taken effect. This is an evaluation where results maybe meaningful in creating feedback for improvement of post certification teacher training and management. On the same issue, a World Bank (Mae Chu Chang, 2012) carried out a study, but that neither aimed at evaluating the program nor generating feedback for improvement of the existing practices. Therefore, it is important for the Ministry to evaluate the ten year implemented certification program as the foundation for reforming teacher training and management, as primary measures for certification.

At the outset, the Ministry and Parliament conceptually ensured that this investment would be worthwhile. During the euphoria period, 2005, the birth of certification appeared to be a more politically supported rather than an empirically tested program. Since then, the program suddenly got popularity as a national priority that forced the Ministry of Finance to allocate the extraordinary amount of budgetary funds (World Bank, 2014). However, efforts to maintain and update the professional status of teachers are now faced with structural obstacles. Since the birth of the Teacher

Reform Act in 2005, the conventional profile of teacher's training and management as stipulated in the previous Law have unlikely changed in favor of the professional support for teachers. Up to the present, the central and regional bureaucracies have exercised control over all the teachers throughout the Archipelago, while assuming that teachers are to play the administrative roles rather than professional ones.

By its very nature, the problem of teachers in Indonesia faces two major issues to address; deployment and quality of teachers.

3. THE NUMBER OF TEACHERS

The certification program can be successful to implement if the number, composition, and deployment of teachers are appropriate and stable. At the present, Indonesia manages almost 50 million primary and secondary school students served by around 3.0 million teachers unevenly distributed in 34 provinces and more than 500 districts or so. Table 1 shows that in Indonesia, the national aggregate Students-Teacher Ratio (STR) was at 1:17 in 2003, which was almost equal to those in more developed countries. However, the low STR can be misleading since it does not always indicate the accurate number of teachers in Indonesia. Another important issue worth noting is whether the teachers are equally deployed among schools in each of the regions.

Determining the number of teachers is not a simple task. Though there might not be an inherent mistake in the concept of teacher certification, the obsession to certify a large number of teachers within a relatively short period can be a mistake. In contrast, Japan started their teacher certification program in 2005, as did Indonesia. However, up to 2013 only a relatively small number of primary (3.7%), lower secondary (6.5%) and upper secondary (22.5%) teachers had achieved certification (Osamu Umezawa,

Table 1
Country Comparison of the Students Teacher Ratio in Basic Education,
By region, Years 2009-2013

No	Country	2009	2010	2011	2012	2013
1	Sub-Saharan Africa	45	43	43	43	42
3	South Asia	38	37	36	36	36
5	Indonesia	20	19	19	18	17
6	Japan	18	18	17	17	17
7	Cambodia	49	48	47	46	47
8	Korea, Rep.	22	21	19	19	18
9	Lao PDR	29	29	27	27	26
10	Malaysia	13	13	12	12	12
11	Philippines	31	31	31	31	31
13	Thailand	16	16	16	16	16
14	Timor-Leste	30	30	31	31	32
15	United States	14	14	14	14	14
16	Vietnam	20	20	20	19	19
17	World	25	24	24	24	24

Source: World Bank (2014)

2013). Whereas, Indonesia has certified almost 1.5 million teachers, or 68% of the national teaching force, one may then raise a question whether certifying the large number teachers is the right measure of showing effective teacher professional development and management.

For two years up to 2015, the average STR had even lowered to 1:15. In fact, the STR in Indonesia stands for all teaching workforce including the part timers at almost 834 thousand or 28% of all the teaching force. To include the part timers in forming the STR can be misleading since the selection process of the teachers was predominantly attributed to filling in the gaps in the number of teachers that were lacking. In addition, those part time teachers are now in an unstable condition as they are not entitled for certification. Therefore, the STR that includes a large number of part time teachers cannot promise anything for education quality improvement. The numbers and composition of teachers in 2015 are as in the following table.

By taking only about the full time teachers into account, the average Students Teacher Ratio in Indonesia is actually typical of developing countries. Table 3 shows that the national aggregate of the full time STR is actually at 1:21, a figure that is far larger than the official figure of the Ministry. The STR can be even larger if the number of retired teachers is taken into account, at 3.7% each year or almost 15% in the four

Table 2
Number of Teachers by Occupational Status, Indonesia 2015

<i>No.</i>	<i>Status of Teachers</i>	<i>Number</i>	<i>%</i>
Full Time Teachers in:			
1	Public School	2.181.320	72,3
2	Private Schools	1,677,165	55.62
Part Time Teachers in:			
1	Public Schools recruited	504,155	16.72
2	Private Schools recruited	833.995	27,7
3	Central Government recruited	600,648	19.92
4	Provincial Gov. recruited	120,476	4.00
5	Local Government recruited	5,257	0.17
	Total	14,946	0.50
		92,668	3.07
		3,015,315	100

Source: The Center for Teacher Professional Development, MOEC Indonesia

Table 3
Students Teacher Ratio by School Levels in Indonesia, Year 2014

<i>No.</i>	<i>Sschool Levels</i>	<i>Full Time Teachers</i>	<i>All Teachers</i>
1	Primary	22	15
2	Lower Secondary	20	14
3	Upper Secondary	17	13
4	Vocational Upper Secondary	24	19
	Total	21	15

Source: Central Bureau of Statistic, Indonesia, year 2012-2014

years to come (MOEC, 2014). In fact, this national aggregated STR is actually appropriate for the Indonesian teaching force, in the case that the teachers are equally distributed and optimally utilized.

In fact, a large number of teachers are unevenly scattered in schools in both rural and urban locations. The limited school survey in West Java (Ace Suryadi, DinnWahyudin and CepiRiyana, 2016) for example shows that the deployment of teachers is unequal among rural and urban areas. This illustrates that the average proportion of part time teachers in rural schools is up to 60% per-school and the STR is at 1:30 or so. Some remote schools are very small that have only 2-3 part time teachers to serve around 50 students. In Those schools, only headmasters are in full time service. Using the equally distributed assumption, Nina Sarjunani (2015) estimates that increasing the STR up to 1:22 would be more cost effective and could reduce teacher salaries to a total of at least US\$ 2.5 Billion each year. Therefore, increasing the average STR and creating an equal deployment of teachers are among the most urgent policy issues to address.

Other research shows that no teacher development would be successful no matter how much money the Government invests in teacher in-service training (World Bank, 2012). This is to say that the quality of the teaching force is not favorable unless a sustainable in-service training system is in place to create a continuing professional development for teachers. Therefore, downsizing the number of teachers is now just in time to make, a through selection of those most competent and highly performing, for example raising the STR to 1:22 or even higher. However, this will work well only if at the same time there is improvement in the quality of teacher colleges and respective professional programs that aim to prepare more competent but smaller quantity of new teachers.

In fact the problem of teacher colleges is a bit more complex and multi dimensional than it has been thought. The number of teacher colleges is very large and continues to grow and now excessive, but the quality of their graduated teachers is bellow expectation (Sunaryo Kartadinata, 2012). In 2015, there were more than 500 private teacher colleges and most of them were unaccredited and mediocre. The total number of student teachers was more than 600 thousands and the number of graduates was about 60 thousand throughout the country. Most of the graduates (80%) are from the private teacher colleges (Sunaryo Kartadinata, 2013; DitjenDikti, 2013). Conversely, the number of public teacher training universities ad colleges is much smaller, consisting of 12 teaching universities and 12 schools of education which produce better quality graduates. Since the absorption capacity of teacher employment is very small, the public teacher colleges are actually sufficient to supply more than enough new better quality teachers.

Up to the present, there is no institution in the country that is held responsible for the development and maintainance of an evidence-based mechanism of teacher planning. This means that no established institutional mechanism is in existence, whose

function is to make estimates on the official number of needed teachers from school level all the way up to the national aggregate based on the most current data. Estimating the number of teachers needed requires a model that analyzes the trends of surplus or shortage of teachers. This model assumes that the school is the most knowledgeable institution to determine and to propose the real number of new teachers demanded by grade levels and subject matter. Based on the school's proposal, teacher colleges can start to plan the number of students admitted annually and prepare them as the prospective teachers while coordinating with the concerned schools and local educational offices as much as possible.

4. TEACHER QUALITY ISSUE

It is not that difficult to understand whether the certified 1.5 Million teachers are actually competent and better performing. The average score of 44.5 out of the 100 scale of the Teacher Competency Test indicates that improving teacher quality remains a great challenge for Indonesia. This also shows that the 'robbery hypothesis' by the previous Minister of Finance has been somewhat proven. We can expect this only happens at the competency test score but real teacher performance might not be that low. However, results of the international school assessment on literacy (measured through PISA, 2012) and on academics (measured through THIMSS, 2013) in school mathematics and science can be an initial signature to indicate the inability of teachers in managing the quality of student learning. Thus, nothing was wrong with the Minister's illustration of the emergency in the education quality in Indonesia.

From now on, the Government has a challenge to prove that teachers' competency has improved since the the teacher certification exercise was initially invested in. Though very limited, a few studies indicate that the post certification teacher training and management is effective in the improvement of the quality of teachers. The additional allowance for certified teachers has been by itself able to increase their average income. One may ask, did the Government use the salary increments as a management tool to encourage teachers improve their competencies and performance? In the normal managerial circumstances, the salary increase may boost teacher's motivation to learn and work better. This is such a relevant policy issue that requires government to pay attention to by reforming teacher training and management following the teacher certification.

The World Bank study (Mae Chu Chang et al, 2012) found a straightforward effect on certification such as doubling teachers' salary that has made them wealthier than ever. However, this is not the core of the issue. The essential issue is instead to prove whether the additional allowance covering almost one-third of the national education budget has empirically effected on improvement of teacher performance. In fact, no empirical proof indicates any positive association of increased allowances with the improved teachers' competency and performance. Cohn & Rossmiller (1987) for example suggests that the effect of teacher salary increase on the quality of student

learning is not always in a positive direction; instead it is dependent solely on the quality of teaching and learning processes that the teacher is able to create. Thus, the core of the issue is not in itself to enhance teachers' salaries, but how the additional allowance can be able to encourage them to improve the quality of teaching and the processes of learning.

The study of Mae Chu Chang, et al (2012) in Indonesia may be able to clarify the problem slightly more clearly. Among the most interesting conclusion of their study is that: "...there is no significant correlation between teacher certification and the average test scores of teacher competence... and no correlation between teacher certification and the average score of student academic achievement." This finding has shown that additional allowances to teachers have not been able to highly motivate teachers to teach better or help their students learn better.

In their study on teacher quality in West Java, Budimansyah and Ace Suryadi (2012) suggest that, "...no promise has been offered by teachers as certificate holders to achieve a higher level of performance". They also find that "...students' academic performance is determined more by the family social economic status rather than by teacher certification." These findings indicate that no improvement of teacher training practices has taken place after certification, such as training that encourages merit based promotion and remuneration as the most fundamental concept of teacher professional certification. The study also finds that: "...the certified teachers are dominated by those with older ages (as an impact of the affirmative policy) and bachelor's degree holders or above (as minimum required credentials), though they are not automatically competent and eligible for certification. This implies that certification only functions as a label of teachers' seniority and credentials." This is relevant to negative Beta Weight of teacher competencies in Table 10 which shows that the more competent the teachers the less probability they achieve certification.

In normal management practice, providing reward to those not performing is a classic *philosophical* error. This is not the case in some countries such as the United States (US). Researchers from Cornell University, for example, conclude their studies that in the US teacher qualification and certification are positively associated with measured student achievement. They suggest that academic qualification of a teacher affects student

Table 4
The Effect of Teacher Factors on Their Certification; (R-Square= 0,354)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	.880	.067		13.063	.000
2. Teaching Experience	.022	.002	.394	13.613	.000
3. Educational Background	.176	.018	.283	9.819	.000
4. Teacher Competencies	-.017	.003	-.174	-6.486	.000

Source: Dasim Budimansyah & Ace Suryadi (2012)

achievement, and will affect stronger if the teachers' educational background is relevant to the subject matter they taught (Goldhaber & Brewer, 2000). The same is true in Japan, Osamu Umezawa (2013) for example suggests that teacher certification in Japan that started in 2005 was followed by strengthening the continuing professional development as the essential instrument for teachers to improve their competencies.

The reversed association between certification and teacher competence in Indonesia was in itself paradoxical. This is such a real phenomenon founded by Dasim and Ace Suryadi (2012) that allowances as an incentive applied to those who are actually incompetent, while the 'disincentive' applied to those were in fact better in performance. This implies that the continuing professional development of teachers did not work well during the certification period in Indonesia. More to that, the merit-based mechanisms in teacher promotion and remuneration did not also work well. Suryadarma et al (2006) for example consistently observes that schools whose teachers and headmasters are certified, well qualified academically, and with longer experience do not always have students with better performance as measured by the average scores in the national exam. To improve the teacher certification, a comprehensive reform towards a merit-based teacher training and management is among the most urgent policy issues to address.

5. DISCUSSION

Certification is not a *panacea* that can automatically cure an illness. Certification is just like seeds that can grow better only if the farm soil is well prepared, maintained, and fertilized. The same is true that certification cannot work well unless the appropriate reforms in teacher training and management are in place. The newly invested certification is just like a strange body that grows very slowly and depends too much on government financing with the least expected pay off. However, certification programs can be good medicine if they are fully supported with merit-based teacher training, promotion, remuneration and a continuing professional development system.

For the time being, there is no foundation to conclude that the teacher certification is successful because no large scale well designed evaluation study has taken place. Therefore, any endeavor that aims to improve the program may not be free from the *trial and error* syndrome. For example, improving the way to certify teachers through applying a tighter formula may not be working well since the real existing teacher management practice does an insignificant change. Besides, these tighter procedures may not be applicable to the large number of teachers already certified. In the absence of evaluation, any defined policy alternative would not enable the Government to solve the fundamental problem of certification as it most likely will come up with the same results.

Since the birth of the program, almost no significant reform in the teacher management profile is in support of a successful certification. At the outset, a continuing professional development (CPD) has evolved through the World Bank sponsored 'Program Bermutu'; "... the provision of learning modules for teachers through local school clusters that aimed to improve the quality of teaching. These focused on lesson

study or classroom action research to train teachers to analyze their lessons, identify new methodologies and ways of teaching, and following new approaches to assess improved results" (Jalal, et al, 2009; p. 121). However, the transformation of this into the routine official mechanism upon closing of the project is not successful. A survey carried out by the Ministry of Education (Ace Suryadi et al; 2014) for example shows that the number of trainings received by teachers was a lot more frequent before the period of certification rather than after. Since its conception, teacher certification employed the conventional in-service teacher training system that is unsustainable in nature.

The existing teacher recruitment, deployment, promotion and remuneration is in compliance to the Civil Servant Act No 43/1999 that in fact is no longer relevant for purposeful teacher certification. According to the Act, teachers are the state's employees like any other ordinary civil servants. The Law drives a mechanism normally applicable through the government bureaucracy that attributes salary and promotion ranks to credentials and seniority. This is not relevant for teacher professional development purposes as defined in the Education Act No. 20/2003 and the Law of Teachers and Lecturers No. 14/2005 which implies that teacher certification and management should conform to regulations applied to teaching as a profession. The bargaining power of teachers should be attributed to the quality of their services. As a matter of fact, teachers' competencies and teaching performance hardly accounted for their selection and promotion.

The concept of authority applied within the bureaucracy is a bit different from that applied to the professional world. In the bureaucratic system one's authority could not be associated with their technical or professional competence and performance. The most competent persons in a bureaucracy are those who have official power to exercise control over parts of the organization through the long chain of commands from the centre down to district offices to which schools and teachers have to comply (M.E. Honingha and E.H. Hooge, 2009). In the professional world, one could have authority as long as they have a great deal of competencies in certain fields of the profession to best serve and satisfy the people being served.

In the bureaucratic environment, the teachers have to conform to the chain of command through the bureaucratic lines. The bureaucracy is just like an infertile land in which the teaching profession may not properly grow because teaching practices should be in line with instructions from the centre or regional officials. These are hardly relevant to the actual needs of teachers to better teach in schools. In effect, the improvement of teacher quality as expected by the certification is now faced with structural problems born out of the bureaucratic system. This is in line with M.E. Honingha and E.H. Hooge (2009; p. 417) who assert that: "... it appears to be vital that teachers are offered professional autonomy to fulfil their educational duties without management dominance." It is very hard to find a genuine professional teacher since in bureaucratic systems compliance to the leaders' instructions is even more dominant than to their professional autonomy. This environment does not challenge teachers to perform highly.

Up to the present, teacher planning, pre-service training, recruitment, and remuneration processes are determined predominantly by the central offices. The large number of teachers unevenly scattered throughout the 34 provinces and 500 districts or so, is among the most difficult tasks for the government to control directly from the central offices. In the near future, teacher management reforms which are in line with the Teacher Act No. 14/2005 and the local Government Act No. 23/2014 are important issues to address. The Central estimate of the number of teachers demanded will never match with the real needs of individual schools by using only the nationally aggregated data. Even though decentralized education started ten years ago, the local government capacity was not in favour of effective teacher management. Therefore, developing local government capacity to exercise teacher planning, deployment and development is one of the most urgent policy issues to address.

The bureaucratic managerial approaches also have been exercised at school level. Acting as the bureaucrats, school principals would be in very difficult position to create professional autonomy among teachers to learn and work better. The school principals in the country are in fact less prepared to become real professional school leaders by means of pre-service and in-service training. Instead, they are teachers with additional responsibility to carry out administrative chores (Ministerial Decree No. 13/2007). In the selection and promotion of school principals, the mechanism has hardly taken their professional competencies into account. Therefore, relying too much on the role of the existing statutorily defined principals runs the risk of unsuccessful school management. This implies that school management reforms are among the most significant choices in support of successful teacher development after certification, as well as reconceptualizing school principals as professional agents of change rather than as the hand of bureaucracy.

6. READDRESSING TEACHER POLICY ISSUES

Professional teachers are expected to be well-trained individuals who think, act and work professionally. As professionals, they need a truly professional managerial environment. It is conceptually wrong when a teacher is employed using a 'labor intensive' assumption since the quality of services is measurable only in terms their quality of service. The problems of teachers in Indonesia are in fact more complex than thought. The complexity of teacher policy issues range from the quality of in-service training, selection and recruitment, deployment, promotion and remuneration, and professional career development. These teacher management issues call for a robust evaluation of the process to come up with better policy alternatives. The following recommendations are some policy alternatives that need further consideration.

Firstly, National Comprehensive Evaluation of Teacher Certification; now is the right time for the Ministry to carry out a nation wide comprehensive evaluation of teacher certification policies and programs by inviting professional experts to participate in the process. This is such an essential need for the Government to perceive a clear picture of the existing practices of the system, how it works, and how it affects improvement of teacher's competence and performance. The research question among

others: is the huge government investment *worthwhile* for further investment? If so, what decision does the Government have to take to meet better results? Therefore, the evaluation needs employing a robust methodology that can come out with a substantial conclusion, without considering political aspects of the program. Therefore, the Government should be able to generate a research-based decision whether to continue the program with some improvements, or to replace it with a more effective policy.

Secondly, the merit based teacher management system; teacher certification is not a panacea that will automatically cure the illness, unless there are reforms to the existing teacher management system, from the school all the way up to the central government level. This starts with reviewing the existing laws and regulations that may not be in favor of improvements as long as teacher professionalism is concerned. Indonesia needs a management system that will create a favorable environment at all levels of management in order to improve teachers' competence and teaching performance. At higher management levels, teacher management in future should reduce the damaging effect of the bureaucratic environment on the teaching workforce within the merit based recruitment, promotion, and remuneration of the teaching profession.

Thirdly, Review Teacher Standards; the Government needs a comprehensive review on the existing structure, content, and formulation of Teacher Competency Standards (TCS). The standards have been in use for more than ten years, so they may be obsolete for future use especially with the vast technological changes and societal demand for quality education, notably in response to the changing demand as per the ASEAN regional competition. For Indonesia to gain the competitive power in its education, these teacher competency and performance standards need revising with against strong international benchmarking. This is important to raise the quality of Indonesian teachers to attain the equivalence or be better than the ASEAN standards to enable them work in other countries at least in the ASEAN region.

Fourthly, Reform the Teacher Colleges; up to present, improvement in the quality of teacher colleges has hardly been taken as a top priority, they are just like stepchildren in the development of higher education. In fact, the amount of the annual budget allocated to the 12 teacher colleges is now comparable to that allocated to one general university. This has put teacher colleges in a very difficult position as they are unable to effectively prepare highly qualified teachers who can deliver better quality education. Besides, the US\$ 6.1 Billion annual investment for teachers' allowance is more expensive than the budget amount needed for the building high quality teacher colleges.

Finally, now is the right time to develop and use an evidence based teacher supply and demand planning system, from schools all the way up to the central government levels. This makes it easier for related institutions to play their contributory functions in the concerned planning cycles. The management cycle consists of schedules that start from selection, recruitment, deployment, promotion, remuneration and development of new teachers. One of the functions is to make some estimates of

teachers demanded by schools and new teachers supplied in line with the needs. All institutions work independently but they are well coordinated within the cycle.

References

- Ace Suryadi (2015), "Teacher Certification and Its Implication for Education Quality Assurance In School." Keynote Speech at the National Seminar of Post Graduate Schools in Indonesia, Thems: "Teacher Education Development In Support for Sustainable Education Quality Improvement" Hotel Mercure Bandung, Tanggal 4 eptember 2015
- Ace Suryadi et al (2014), "Report on the Small Scale Evaluation of Implementation of 2013 the School Curriculum in Indonesia." Jakarta, Ministry of Education and Culture
- Ace Suryadi, Dinn Wahyudin and Cepi Riyana (2016), "Report , School Transportational Access for Children in Remote Villages in West Java, Indonesia.") Bandung, Bureau of Social Services, West Java Province.
- APBN-Ministry of Finance (2014), "Indonesia: National Public Budget and Expenditure." Jakarta, Ministry of Finance of the Republic of Indonesia
- BPS (2014) "School Survey in Indonesia," Jakarta, Central Bureau of Statistic of the Republic of Indonesia, year 2012-2014
- Budimansyah and Ace Suryadi Dasim (2012), "Effect of Teacher Certification on the Teachers' Competence and the Quality of Student Learning in West Java Indonesia." Bandung, the Institute of Research and Community Services, Universitas Pendidikan Indonesia.
- Cohn, Elchanan and Richard A. Rossmiller (1987), "Research on Effective Schools: Implications for Less Developed Countries." In *Comparative Education Review*, vol. 31, no. 3. 1987
- Ditjen Dikti (2013), "Indonesia: The Higher Education Education Statistic, Year 2013." Jakarta, Directorate General of higher Education, Ministry of education and Culture
- Fasli Jalal (2006), "Sertifikasi Guru untuk Mewujudkan pendidikan yang bermutu." Jakarta, Ditjen PMPTK, ditulis oleh Administrator, 02 April 2006
- Fasli Jalal, Muchlas Samani, Mae Chu Chang, Ritchie Stevenson, Andrew B Ragatz, Siwage D Negar (2009), "Teacher Certification in Indonesia: A Strategy for Teacher Quality Improvement." The volume is a product of the Ministry of National Education and World Bank staff and consultants.
- Fullan, M. (1991), "The Best Faculty of Education in the Country: A Fable." Submitted to the Strategic Planning Committee. Faculty of Education, University of Toronto.
- Fullan, Michael G. (1993), The Professional Teacher; Why Teachers Must Become Change Agents., in *Educational Leadership* Volume 50 Number 6 March 1993
- Goldhaber, D. D., & Brewer, D. J. (2000), "Does teacher certification matter: High school teacher certification status and student achievement. In *Educational Evaluation and Policy Analysis*, 22(2), 129-145.
- Hargreaves, Andy; Michael G. Fullan; Andy Hargreaves (1992), *Understanding Teacher Development (Teacher Development Series) Paperback, 253 Pages, Published 1992; ISBN-10: 0-8077-3188-9/0807731889; ISBN-13: 978-0-8077-3188-8 / 9780807731888*
- Honingha, M. E.; E. H. Hooge (2009), "Reconsidering the tension between bureaucracy and professionalism in publicly and privately funded schoolschool Leadership and Management, Vol. 29, No. 4, September 2009, pp. 405420

- Kartadinata, Sunaryo (2012), "Refleksi Permasalahan Birokrasi Pengelolaan Serta Implikasinya Bagi Pengelolaan Guru Secara Profesional Di Masa Depan." Working Paper Presented at the National Symposium on Teacher. Bandung, Indonesia University of Education 28th October 2012.
- Kartadinata, Sunaryo (2013), "Redesigning Professional Education for Teachers." Academic Senate Regulation of Universitas Pendidikan Indonesia. Bandung, Universitas pendidikan Indonesia.
- Kim, E. (2007), *Educational Policy and Reforms in Korea.*, Seoul, diterbitkan oleh Korean Educational Development Institute Kore Selatan
- Mae Chu Chang, Sheldon Shaeffer, Samer Al-Samarrai, Andrew B. Ragatz, Joppe de Ree, and Ritchie Stevenson (2012), *Teacher Reform in Indonesia: The Role of Politics and Evidence in Policy Making.* IBRD, the World Bank., 1818 H Street NW, Washington DC 20433, Internet: www.worldbank.org
- Michael O. Martin, Ina V.S. Mullis, Pierre Foy, and Gabrielle M. Stanco (2013), "TIMSS 2012 International Results in Science"., Copyright © 2012 International Association for the Evaluation of Educational Achievement (IEA)., IMSS & PIRLS International Study Center, Lynch School of Education, Boston College Chestnut Hill, MA02467 United State
- MOEC (2015), "Statistics of Teacher in Indonesia" Jakarta, Center for Teacher Professional Development the Ministry of Education and Culture.
- Nina Sardjunani (2015), "Peningkatan Kualitas dan Profesionalisme Pendidik dan tenaga Kependidikan." Deputi Menteri PPN/Kepala Bappenas Bidang SDM dan Kebudayaan, Jakarta, 5 Maret 2014. Analisis ini bersumber dari estimasi Bank Dunia: *Public expenditure Review and Teacher Reform in Indonesia*
- OECD (2014), *PISA 2012 Results: What Students Know and Can Do – Student Performance in Mathematics, Reading and Science (Volume I, Revised edition, February 2014)*, PISA, OECD Publishing. <http://dx.doi.org/10.1787/9789264201118-en>
- OECD (2009), "Education at a Glance 2009" © OECD 20, This work is published on the responsibility of the Secretary-General of the OECD., Downloaded 20 December 2015 from: www.oecd.org/publishing/corrigenda
- Osamu Umezawa (2013), "Reconstructing Japanese Teacher Education System, and Vision of the Shizuoka University as National University Corporation." The Keynote Speech presented at the UPI-Shizuoka University International Conference on Teacher Education. Bandung, 20 December 2013.
- PDSP (2015), "Statistik Sekolah Tahun 2015". The Center for Statistics of Education, Jakarta the General of Ministry of Education, Indonesia.
- Perkembangan Pagu Definitif Anggaran Pendapatan dan Belanja Negara (APBN) bidang Pendidikan, Tahun 2009-2014
- PP No. 19/2005 telah mengalami beberapa kali perubahan nomenklatur kementerian dan unit utama terkait, yaitu melalui PP No. 32/2014 dan yang terakhir adalah PP No 15 Tahun 2015.
- Suryadarma, D., Suryahadi, A., and Sumarto (2006), "Causes of Low Secondary School Enrollment in Indonesia. Jakarta: SMERU Research Institute, Working Paper
- World Bank (2014), *Teacher Reform in Indonesia: The Role of Politics and Evidence in Policy Making.* By Mae Chu Chang, Sheldon Shaeffer, Samer Al-Samarrai, Andrew B. Ragatz, Joppe de Ree, and Ritchie Stevenson., © 2014 International Bank for Reconstruction and Development / The World Bank 1818 H Street NW, Washington DC 20433