



## **EMPOWERING TEACHERS TO INCREASE A QUALITY OF INDONESIAN'S EDUCATION**

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**Abstract :** Quality of education is greatly influenced by the quality of teachers and students. To provide high quality of education, the government should commit to ensure that every student has the opportunity to learn from qualified and inspiring teachers. In recognition of the importance of qualified teachers, policy initiatives that push toward getting smarter people into the teacher workforce have been introduced. This paper provides an overview of the government's strategies, teacher training and certification, UKG, MGMP, and KKG, to improve the quality of teachers in Indonesia. The idea is simple: if we can insist on better prepared and more able teachers, teacher quality will necessarily rise and student performance will respond.

**Key words:** Teacher's Training, Certification, Policy, Initiatives, Quality of Teachers.

## **Introduction**

The quality of education is greatly influenced by the quality of teachers. Research shows that what teachers know and what they are able to do has a significant impact on the academic performance of their students. As a recent McKinsey report notes, “The quality of an education system cannot exceed the quality of its teachers” (Barber and Mourshed, 2007, p.16) According to Global Monitoring Report 2011: The Hidden Crisis, Armed Conflict and Education which was published by (UNESCO), *education development index* (EDI) according to 2008 data is 0,934. It is show that Indonesia is put in the rank of-69 from 127 countries in the world. EDI can be said in the good position or high category if it can reach 0,95-1. Medium category if the point is more than 0,80, and the low category if the index is under 0,80. Meanwhile, PISA researchers conclude that half of Indonesia’s 15-year-olds do not have “a basic level of proficiency, at which students begin to demonstrate the reading literacy competencies that will enable them to participate effectively and productively in life [p50. in OECD (2010)]. This suggests that many teachers and schools fail to prepare the next generation for an ever-more demanding global labor market.

According to PISA (2013) in the field of science, reading and mathematics Indonesian students got the rank of 65 from 66 countries. What can cause the quality of education become low? One of the factor is teacher. Teacher with their problems in doing their tasks. Teachers have very hard work not only in the class but also outside the class. A teacher serve as a role model to students. Failing to act professionally sets a bad example and may also cause to lose the respect of students. To retain the respect of students and colleagues and provide students with the best education possible, professionalism must be applied in all aspects of career.

Condition of the teacher in Indonesia is also apprehensive. Some teachers in Indonesia declare unfair to teach. The education of many Indonesian teachers is still lower than what is required by law. As we know that on the effort of increasing teacher quality as stated in UU No.14 year 2005 and government regulation number 74 year 2008 require that all teachers should have four-year degree and have an educator certificate getting from professional teaching course, but in fact some of the teachers in Indonesia do not fulfil these requirements. Hendayana et al on their article stated that teachers in Indonesia have relatively lower level of academic qualification than those neighbouring nations. From the research, they found that more than 70% of teachers at secondary schools were qualified (71.1% for junior secondary and 79.7% for senior secondary), and only 22.2% were qualified at the primary level.

Basically, teacher quality cannot be readily linked to teacher characteristics. In subsection 8 national law number 14 year 2005, teacher must have academic qualification, competencies, and educator certificate and in subsection 4 Government Regulation number 74 year 2008, it is strongly suggested that educator certificate for teacher is obtained through professional education of teacher that is carried out by college which has accredited education personnel procurement programs, both carried out by government and society, and established by government. For these reasons, government drafted a strategic by

designing certification as the requirement for teachers' quality. Certification has been adopted as a requirement for both in-service and pre-service teachers, and is designed to establish a quality benchmark for all teachers, including government and non-government teachers. It will provide a public guarantee of the standards of training and competency required from teachers. Such comprehensive and wide reaching changes in the administration of the education system of a nation such as Indonesia has implications for the development of education systems elsewhere in the world. Already the initiative has generated research activity related to the employment and deployment of teachers; a video-study of teacher classroom performance; an in-depth review of the local school cluster-based in-service training structures; and a comprehensive study of the impact of certification on teacher motivation and student learning. External and internal studies to monitor and evaluate the progress of the certification process have been commissioned by the National Education Ministry and a number of recommendations have been adopted. review of the local school cluster-based in-service training structures; and a comprehensive study of the impact of certification on teacher motivation and student learning. External and internal studies to monitor and evaluate the progress of the certification process have been commissioned by the National Education Ministry and a number of recommendations have been adopted.

Not enough supervision can also lead to unqualified teacher. According to Lawrence (2013) Supervision plays a vital role to improve the teaching-learning process. Thus supervision is a creative and dynamic process giving friendly guidance and direction to teachers and pupils for improving themselves and the teaching-learning situation of the accomplishment of the desired goals of education. By doing this, it is hoped that the quality of teachers will increase. Teachers have multi-function roles. Law number 14 year 2005 said that teachers roles as designer, manager, evaluator, and motivator. In order to create teachers professionalism, supervision which is done continuously is needed.

The quality of teacher plays a crucial role in determining a nation's competitiveness, especially in globalization era. Indonesia, in particular, has acknowledged the importance of improving the quality of education, especially the quality of teachers, in order to supply the country with highly competitive human resources. With 65% of the total number of 2.7 million teachers in Indonesia not meeting the requirement as a professional teacher (Jalal, 2009), it is now needed a genius strategy to produce a professional teacher to compete locally, nationally or even internationally. It can be done if societies and governments are working together to achieve an improvement in the quality of teacher.

To provide a high quality education, the government should commit to ensure that every student has the opportunity to learn from a qualified and inspiring teacher (Jusuf, 2005). Education international (2009) suggest that if we want to improve educational quality, we should improve the quality of the teacher. Actually, teacher is not the only one factor that influences the successful of education, but teacher is the most important thing in teaching and learning process and the quality of education is on their hand because what teachers have taught and applied in the classroom will give some impacts to the student results. UNDP (2010) states that the quality of teachers is the most important factor in improving

the quality of education and research shows that what teachers know and what they are able to do have a significant impact on the academic performance of their students. Jusuf (2005), on his article stated that it is impossible to build high quality of education without qualified competent teachers and it means that there is a strong synchronizes between the teacher competences and the student performances.

### **Teachers' Quality and Certification Programme in Indonesia**

Good quality teachers are expected to show a high commitment to their profession as teachers. They are required to have ability to take the initiative and be innovative in inventing media of learning. They must professionally have ability to communicate clearly and pleasantly. They should be able to facilitate learning process. It involves planning effectively, establishing rules that are reasonable and not excessive in number, and arranging the classroom so that instructions go smoothly.

Across the educational systems of the world, few issues have received more attention in recent years that the problem of ensuring that elementary and secondary-school classrooms are all staffed with adequately qualified teachers (Mullis, et al., 2000; OECD, 1994, 2005; Wang, et al., 2003). Even in nations where students routinely score high on international exams, the issue of teacher quality is the subject of much concern. Therefore, teachers and the quality of their teaching are now widely recognized as the most critical of many important factors that combine to create overall quality of education (Darling- Hammond, 2000; Leu & Price Rom, 2006; UNESCO, 2004).

It is widely believed that the quality of teachers and teaching are among the most important factors shaping the learning and growth of students. Moreover, this impact goes beyond student academic achievement. According to the results of the Third International Mathematics and Science Study (TIMSS), the performance of Indonesian eighth-grade students' in both fields is quite poor. Compared to the international average, Indonesian students' level of performance is below the international average in the fields of both mathematics and science. In terms of performance in mathematics, Indonesian students ranked 34 out of 45 countries surveyed in 2003. In 2007, this position dropped to 36 out of 49 countries surveyed. In science, Indonesian students were ranked 36 out of 45 countries surveyed in 2003, although the position improved slightly to 35 out of 49 countries in 2007

Table 1.1 Score performance of Indonesian Secondary students' in Mathematics and Science

	Mathematics			Science		
	1999	2003	2007	1999	2003	2007
Indonesia	403	411 (34/45)	397 (36/49)	435	420 (36/45)	427 (35/49)
Top achiever	604	605	598	568	578	567
Lowest achiever	275	264	307	243	244	303
International average		466	451		473	466

The poor performance of Indonesian students was confirmed by the 2012 Program for International Student Assessment (PISA). From 65 countries surveyed, Indonesia ranked 64. Furthermore, the scores achieved by Indonesian students are low compared to the median scores of the international students' achievement in the three subjects, i.e. science, reading and mathematics.

In addition, Indonesia has been facing several problems. It was shown by the research results from *Pearson Learning Curve in 2013* about the quality of Indonesia's education system, it was mapped that Indonesia is in 40th of the 40 countries. It was in line with Baswedan (2014) that the teachers' competency test in 2012 to 460.000 teachers show that the average of the teachers' competency was only 44.5 of the standard value of the expected value.

If one accepts the premise that quality teachers produce quality students, then the poor achievements of students can be attributed to the poor quality of teachers in Indonesia. Thus, students' poor performance in both TIMSS and PISA presumably reflects an inadequate standard of teaching throughout Indonesian schools. Arguably, the achievement of Indonesian students may reflect the lower quality of teachers in Indonesia relative to other countries.

Moreover, Indonesia has many teachers who have lower qualification than it is required by the Ministry of Education. MONE (2008) revealed the statistic which indicated the level of the teacher's academic qualification in Indonesia was relatively low compared to those neighboring nation (cited in Jalal et al, 2009). It was also shown that more than 60 percent of 2.78 million teachers have not reached the level of qualification of four year bachelor degree.

The quality of education plays a crucial role in determining a nation's competitiveness. Thus, most societies and governments have promoted strategies to improve the quality of education. Indonesia, in particular, has acknowledged the importance of improving the quality of its education system in order to supply the country with highly competitive human resources.

Dealing with the problems above, Indonesian government designs a teacher certification program to improve all aspects of teacher quality including competency, academic qualification, certification, welfare, and status and reward systems for teachers. The government believes that this program is the most comprehensive strategy for teacher quality improvement (MONE, 2009). In line with the demand for an increase in the quality of education, the government of Indonesia instituted a policy in the form of *Statute No. 14 Year 2005* pertaining to instructors, and *Statute No. 19 Year 2005* regarding the National Standard of Education. Based on Law Number 74 Year 2008 on Teacher and Lecturer and National Education Ministry Regulation Number 11 Year 2011 on Teacher Certification, the certification process consists of four methods: 1) awarded certification, 2) porto folio, 3) special education, and 4) training for teacher professional.

Certification program is a process of granting certificate to teachers who have met certain requirements. Certification is done through four ways, including portfolio assessment; training for teachers; direct certification, and professional education for teachers. Certification aims to improve the quality of teachers and

teachers' welfare. But, in the fact, this goal cannot be achieved because the method used still contains some weaknesses.

1. *Portfolio assessment* is the recognition of professional experience of teachers in the form of an assessment of the collection of documents that describe:
  - a. academic qualifications;
  - b. education and training;
  - c. teaching experience;
  - d. planning and implementation of learning;
  - e. assessment of the supervisor;
  - f. academic achievement;
  - g. the work of professional development;
  - h. participation in scientific forums;
  - i. organizational experience in the field of educational and
  - j. social development; and
  - k. relevant award in the field of education.

*Portfolio assessment* is followed by a teacher who has a graduate academic qualification (S-1) or a diploma four (D IV), or do not meet the academic qualifications of the S-1 or D-IV when they are aged 50 years and has 20 years experience working as a teacher.

2. *Training for teachers* is teacher certification through professional training for teachers who:
  - a. do not have the readiness for self-assessment portfolio;
  - b. do not pass the portfolio assessment, and
  - c. are declared as ineligible teacher for direct certification.
3. *Direct certification* is a certification by giving educator certificate directly for teachers who already have academic qualifications S-2 (master) or S-3 (doctor).
4. *Professional education for teachers* is organized educational programs to prepare teachers to master the full competence of teachers in accordance with national standards of education so that educators can obtain an educator certificate.

The certification system aims to improve teachers' competencies while addressing the related issues of low pay and poor motivation. The teacher certification program has significantly upgraded the quality of teachers. The programme allows for compensating certified teachers by giving them additional allowance. Thus, teachers are more eager in upgrading their knowledge and teaching skills.

This program is carried out to be a comprehensive program, starts with the teacher mapping process, giving training, and ends with the evaluating teacher through certification and other evaluation. It help teachers acquire or deepen their knowledge about subject matter content, teaching skills, and assessment methods required to implement an existing or a new curriculum. Relevant activities include: improving teachers' general education background, improving teachers' knowledge and understanding of the subjects they teach, understanding how children learn different subjects, developing practical skills and competencies,

learning new teaching strategies, learning how to use new technologies, strengthening professionalism and ethics, and providing knowledge and skills linked to the ever-changing needs of a dynamic society. (UNESCO Institute for Statistics, 2006).

Arguably, the new policy is the culmination of several previous attempts to improve the quality of teachers as a means to improving the overall quality of education, following a number of preceding policies and strategies initiated to improve the quality and competency of teachers. These policies and strategies were established in response to the situation and dynamics of the education sector at particular points in time.

Figure 1. Strategy for accelerating Teacher Professionalism

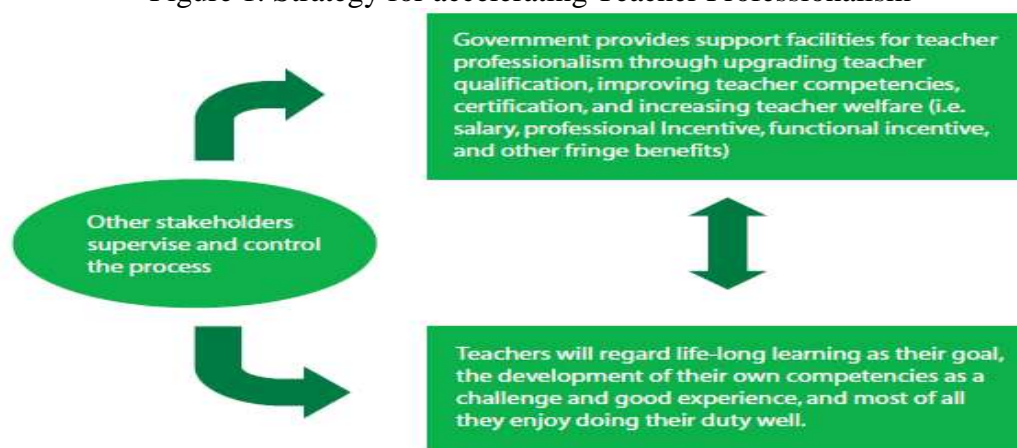


Figure 1. shows the intended strategy for accelerating teacher professionalism. There are three key components for ensuring the rapid success of the process, these being government, teachers, and society (including parents). The government provides support for the improvement of teacher professionalism. This support involves upgrading teacher qualifications, improving teacher competencies, providing certification, and improving teacher welfare (salary, professional incentives, functional incentives, and other fringe benefits). Teachers grow to adopt life-long learning as their need, the self-development of their competencies as a challenge and good experience, and do their duty well. Finally, all stakeholders, including school principals, school supervisors, school committees, society and parents, need to play a supervisory and controlling role for the effectiveness of the project.

Teachers' efforts to improve the professionalism should be started from the teachers themselves. As certified teachers, they had to strive to increase their professionalism by following many activities undertaken by teachers from other schools such as through teacher working group conducted by teachers from the Department of Education and Culture environment.

The teacher working group (KKG and MGMP) concept is based on the assumption that one of the best forms of support for the professional development of teachers at the local level is *self-help*. Its key principles include: collaboration; a focus on practical rather than theoretical knowledge; grass-roots support; a focus on topics that relate to the local context; and the capacity for on-going consultation

and discussion during the progress of programs. This gives the professional development a distinctive character that distinguishes it from the traditional form of off-site in-service courses conducted at district or provincial level.

In good working groups, a program of activities will be planned. This program might include: preparation curriculum documents by a team of teachers for use across their cluster of schools; production of resources for sharing (in one case observed, a CD on teaching techniques in Physics had been prepared for dissemination to other teachers); group sessions for lesson preparation; and, organization of inter-school classroom observations.

### **Discussion**

Teachers as educators hold the central point in an educational institution. This is because they are responsible for the learning process implemented at school owing to the fact that teachers always act as the closest persons in their students' educational states. Their significance is not only as the learning director, but also as a guide for their students' success. They are demanded to show their professionalism as a qualified teacher to carry out their duty as the agent of change in expanding the students' knowledge and life skill in the community they live in. Each essence of the material carried out by the teachers will show results when students understand and apply it in their daily life.

We cannot expect students to change what they do if we are content for teachers to continue doing what they have always done. When teachers are given the opportunity, via high-quality professional development, to learn new strategies for teaching to rigorous standards, they report changing their teaching in the classroom (Alexander, Heaviside, & Farris, 1998). Changes in teachers' beliefs are more likely to occur in settings in which teachers consider learning a *communal* activity (Joyce & Showers, 2002). When teachers take time to interact, study together, discuss teaching, and help one another put into practice new skills and strategies, they grow and their students' behaviors improve accordingly.

Statute 14 year 2005 regarding teachers states that certification is the process of presenting an education certificate for teachers and lecturers. In 2006, Indonesia started implementing a nation-wide program of teacher certification with the aim to certify as many as 2.3 million teachers by 2015 with the budgetary cost of as much as US\$ 5,600 million (Fahmi, Maulana, & Yusuf, 2011). This education certificate is official proof and acknowledgement that a teacher or lecturer is a professional. This certificate is the given acknowledgement that possesses the competence to carry out an educational service at a particular educational unit after passing a competency test given by a certification board (Mulyasa, 2008, p. 33). Teacher certification is the process of presenting an education certificate to a teacher. This education certificate is given to teachers that have fulfilled the standards pertaining to a professional educator. Professional educators are an essential requirement in creating quality education in system and practice (Jalal, 2007).

In 2012, all certified teachers had to participate in a competency test. The assessment became known by its acronym, UKG. The UKG can be strengthened and expanded to capture the entire population of teachers and used as a high-stakes



component in the process of selecting teachers for career advancement and for professional certification. Teachers with insufficient passing grades would not be allowed to advance. This will provide them and other stakeholders with incentives to take the TPMS seriously and embark on a process of professional development to improve competencies.

The “effect” of certification on teacher quality overall is a combination of three forces working together. The three distinct mechanisms through which the teacher certification program might lead to improvements in the overall quality of teaching are as follows:

**1. The behavioral mechanism.**

Certification and the associated certification allowance would not only provide recognition but also a significant pay raise. The hope was that teachers who were certified would be more likely to show up for class on time, prepare better for lessons, and forgo outside employment. These changes were expected to improve the quality of teaching and, ultimately, student-learning outcomes.

**2. The academic upgrading mechanism.**

In order to receive access to the certification program, unqualified teachers had to upgrade their academic qualifications to the bachelor’s degree level or equivalent. In the process of upgrading, teachers were expected to acquire new skills that would make them better teachers. This goes along with the research done by Hidayat (2014) entitled Analysis on the difference between the teaching performance of certified teachers and non-certified teachers, which shows that teacher certification program was successful in improving teachers; performance at SMP Negeri Jakarta Timur. Teacher certification is the policy and the means the government uses to enable teachers to be labeled as professionals and to be eligible to receive compensation for the acknowledgement of professionalism which they carry.

**3. The attraction mechanism.**

The salary increase, tied to certification, was hoped to make the teaching profession more competitive in relation to other professions. The aim was that it would attract brighter high-school graduates to the teaching profession.

To measure the impacts resulting from Indonesia’s massive teacher certification programme, the World Bank and MoEC recently partnered to implement a large-scale randomised evaluation of the reforms. Emerging evidence shows that Indonesia’s certification helps reduce pressures on teachers to take additional jobs that could distract from their main teaching responsibilities: teachers who are certified are 27 percentage points less likely to have a second job and 38 percentage points less likely to have financial problems (World Bank 2012).

Besides coaching certified teachers program through training and education activity, some coaching activities that improve the quality of teachers' can be done through Principal Congress (MKSS), Subject Teacher Congress (MGMPs) or through the Teacher Working Group (KKG). The principals can discuss many things among them in this forum. Sometimes the principals may have discussion among them in informal forum. This moment is usually about sharing information and experience, including certification. Because not specifically discussed by principals in the forum, certification issue is often missed. From the information

obtained, the MKKS is hard to make because of financial matter. Ideally, MGMP can function as an effective media for teachers to discuss many things, it is not only about learning process in the classroom, but also about teachers' personal problem, teachers' competence and professionalism as a teacher to interact with people.

A study of teacher working groups in Indonesia (KKG/MGMP) identified them as a critical support mechanism for teachers at the local school-cluster level. Whilst providing a potentially effective continuous professional development network; the study found there is need to strengthen this mechanism through greater activation by district offices; access to more adequate funding; training for working group management committees; greater access to workshop leaders and professional trainers; greater guidance in conducting training programs; closer regulation of cluster meetings; access to innovative trainers; and leadership training for key members of the group.

To work effectively in the delivery of teacher courses and activities, the KKG and MGMP need greater support from all levels of the system. This support is critical if they are to be able to perform the task now required of them and to ensure sustainability as a mechanism during the 10 year period for certification and beyond. This useful and existing structure has the potential for transformation into a dynamic and responsive network driven by teachers to improve their teaching practice and to create a truly professional support network.

Generally, survey results indicate that teachers in Indonesia find the working groups to be very beneficial. In an open-ended survey question, by far the most common response listed was improved knowledge, skills, competencies and professionalism. Teachers also found working groups to be an ideal place in which to discuss difficult problems and seek solutions (e.g. discussing with other teachers how to teach a difficult topic or deal with specific issues faced in class). Moreover, working group sessions is an opportunity to work together to develop innovative teaching and learning models, to create , and share teaching aids and other media for use in classes.

#### **4. Conclusion**

Indonesia is in the process of implementing the education reformation. One of the main objectives is to increase the number of qualified teachers and enhance the teachers' quality through professional development program, namely certification. Teacher certification is public policy and therefore must be implemented effectively. This complexity requires good and effective socialization, clear and explicit coordination, and must consider supporting and impeding factors in the implementation of teacher certification policy. By controlling the intake into teacher's training institutions—selecting the cream of the crop—Indonesia can ensure that the quality of new teachers improves, gradually raising the quality of education over the long term. Moreover, government needs to establish a regular evaluation mechanism to monitor the sustainability of certified.

#### **References**

- Alexander, R. (2001). *Culture & Pedagogy*. Oxford: Blackwell Publishing Ltd.
- Barber, M., and M. Mourshed. 2007. "How the World's Best Performing Schools Come out on Top." McKinsey & Company, New York, USA
- Baswedan, A.,R. (2014). Gawat darurat pendidikan di Indonesia. Meteri presentasi dalam silaturrahi Kementrian dengan Kepala Dinas di Jakarta 1 Desember 2014. Retrieved from [http://www.kemendiknas.go.id/in September](http://www.kemendiknas.go.id/in_September) 18, 2016.
- Darling-Hammond, L. (2000). "Teacher Quality and Student Achievement: A Review of State Policy Evidence". *Educational Policy Analysis Archives*, 8(1). Retrieved from <http://epaa.asu.edu/ojs/article/download/392/515>
- Education International. (2009). Education For All by 2015: Education International's Response in the Global Monitoring Report 2009. Retrieved from <https://download.ei-ie.org/docs/IRISDocuments/Education/Education%20For%20All/Global%20Monitorin>
- Fahmi, M., Maulana, A., & Yusuf, A. A. (2011). *Teacher Certification in Indonesia: A Confusion of Means and Ends*. Center for Economics and Development Studies (CEDS) Padjadjaran University. No. 201107.
- Government regulation number 74 year 2008
- Hidayat, S. (2014). Analysis on the difference between the teaching performance of certified teachers and non-certified teachers. *International journal of latest research in science*, 6-12. Retrieved from <http://files.eric.ed.gov/fulltext/EJ1060802.pdf>
- Hendayana, S., Supriatna, A., & Imansyah, H. ( ). *Indonesia's Issues and Challanges on Quality Improvement Mathematic and Science Education*. Indonesian University of Indonesia. Retrieved from [http://aadcice.hiroshima-u.ac.jp/e/publications/sosho4\\_1-04.pdf](http://aadcice.hiroshima-u.ac.jp/e/publications/sosho4_1-04.pdf).
- Human Development East Asia and Pacific Region. (2010). *Transforming Indonesia's Teaching Force: Volume I:Executive Summary*. The World Bank Office Jakarta: Jakarta.
- International Association for the Evaluation of Educational Achievement [IEA]. (2012) 'TIMSS 2011 International Results in Reading'. TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College, Chestnut Hill, MA.
- Jalal, F. (2007). *Tanya jawab tentang sertifikasi guru*. Jakarta: Depdiknas Direktorat Jenderal PMPTK.
- Jalal, F., Samani, M., Chang, M, C., Stevenson, R., Ragatz, A, B., & Negara, S, D. (2009). *Teacher Certification in Indonesia : A Strategy for Teacher Quality Improvement*. Public Disclosed Authorized.
- Jusuf, H.( 2005). Improving teacher quality, a keyword for improving education facing global challenges. *The Turkish Online Journal of Educational Technology-TOJET*.4(1). ISSN:1303-6521. Retrieved from <http://www.tojet.net/articles/v4i1/414.pdf>
- Law Number 14 Year 2005 Regarding Teachers & Lecturers.
- Lawrence,A. (2013).Educational Supervision. Retrieved from <https://arullawrence.wordpress.com/2013/11/06/educational-supervision>.

- Leu, E., & Price-Rom, A. (2006). *Quality of education and teacher learning: A review of the literature*. Washington DC: USAID/ EQUIP1.
- Mullis, I. V., MARTIN, P. F., & ARORA. (2012). *Timss 2011 International Results in Mathematics*. Retrieved from [http://timssandpirls.bc.edu/timss2011/downloads/T11\\_IR\\_Mathematics\\_FullBook.pdf](http://timssandpirls.bc.edu/timss2011/downloads/T11_IR_Mathematics_FullBook.pdf)
- Mulyasa. (2008). *Standar kompetensi dan sertifikasi guru*. Bandung: Rosda Karya.
- Organization for Economic Cooperation and Cultural Development. (1994). *Quality in teaching*. Paris: OECD.
- OECD. (2010). PISA 2009 Results: What Students Know and Can Do- Students performance in Reading, Mathematics and Science. Retrieved from <https://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-1.pdf>.
- PISA.(2013). What Students Know and Can Do- Students performance in Reading, Mathematics and Science. Retrieved from <https://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-1.pdf>.
- Undang-Undang Republik Indonesia Nomor 14 tahun 2005. *Tentang Guru dan Dosen*. Bandung: Citra Umbara.
- Wang, A., Coleman, A., Coley, R., & Phelps, R. (2003). *Preparing teachers around the world*. Princeton, NJ: Educational Testing Service.
- World Bank. (2012). *Bantuan Siswa Miskin: Cash Transfers for Poor Students. Social Assistance Program and Public Expenditure Review. Report 67319*. Jakarta: World Bank.