

## Quality Assurance System in Politeknik Negeri Bandung: Experience in 2005 - 2017

Herawati Budiastuti<sup>(1)\*</sup>, Ediana Sutjiredjeki<sup>(1)</sup>, Laura Ofelia Astuti<sup>(2)</sup>

<sup>(1)</sup>Research and Community Services Unit (UPPM), Politeknik Negeri Bandung

<sup>(2)</sup>Accounting Study Program, Accounting Department, Politeknik Negeri Bandung

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### Abstract

Indonesian higher education institutions indirectly contribute to the high unemployed educated labor. To seriously reduce this problem, higher education institutions have to conduct all efforts, including enhancement of higher education quality assurance system so that the higher education institutions capable to produce educated relevant employees. Through establishment of Law No. 20/2003 about National Education System, The Indonesian Government fully supports the implementation of quality assurance in higher education institutions. Three pillars of the higher education quality assurance system that has to be implemented by all higher education institutions are internal and external quality assurance systems as well as the appropriate data base pillar. In responding these pillars, Polban shifted its quality assurance educational system from ISO 9001:2008 to become internal quality assurance system. This internal quality assurance system conducted through internal audits together with external quality assurance system (accreditation) performed by National Accreditation Body, completed by the appropriate data base are a complete reliable quality assurance system chosen. "A" level of institutional accreditation was then granted in 2016 as a result of implementation of the three pillars of the higher education quality assurance system. Research and Community Services Unit (UPPM) as a supporting unit in conducting research and community services activities followed Polban quality assurance system to ensure quality assurance of these lecturers' activities. During implementation of quality assurance system based on the ISO 9001:2008, UPPM possessed all ISO documentation, i.e. Quality Manual, Procedures, Work Instruction, and all related Forms supporting all documents. After Polban shifted its quality assurance system to internal quality assurance system, UPPM also followed and adapted to the institution system. The documentation prepared during the previous ISO system could still be used as the new documentation with a little bit adaptation.

*Keywords: higher education; three pilars; ISO 9001; internal quality assurance system*

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### Introduction

Based on human resources possessed by Indonesia, Indonesia is categorized as a quietly competitive country. From the Global Competitiveness Index, it shows that Indonesia has competitiveness level on 38<sup>th</sup> in 2012; and it increases to the 34<sup>th</sup> level in 2014. This competitiveness level is still further above the Philippines (52) and Vietnam (68) however it is still below Malaysia (20), Thailand (31) and Singapore (2), (<http://reports.weforum.org>). If it is compared with the competitiveness data in 2016, Indonesia drop to the 37<sup>th</sup> level and left behind by the three neighboring countries (Malaysia, 18, Thailand, 32 and Singapore 2) but it was still above the Philippines (47) and Vietnam (56) (Klaus Schwab & Sala-i-Martin 2017).

The 37<sup>th</sup> level in the Global Competitiveness Index represents the level of higher education and training pillar (5th pillar) as well as the innovation pillar (as the last pillar from 12 pillars evaluated to determine the level of competitiveness). From these two pillars, Indonesia is actually still capable to intensify and increase its competitiveness. From higher education sides, the problems that can be analyzed are (1) limited capacity of qualified higher education institutions; (2) highly education cost that can be afforded; (3) the low relevance of higher education towards the needs of work force and industry; and (4) limited budget for education in Indonesian National Budget (Pandie & Suttedjo, 2015).

The problem of low relevance of higher education with the needs of work force and industry is also one of the causes of the high unemployees of educated labor. From the data of Statistics Indonesia (2015), Indonesia had 9.5% unemployed (or 688.660 people) in which these unemployees were high educated labor. Based on this problem, higher education institutions have to seriously provide efforts in reducing problems and to strengthen



their contribution in generating educated relevant employees in Indonesia. One thing that can be done in improving the quality of educated relevant employees is by enhancing the quality assurance in higher education institutions.

### **Quality Assurance System in Indonesian Higher Education**

Quality assurance of higher education in Indonesia aims to ensure quality of higher education implemented by higher education institutions. As stated in Indonesian Law No. 20 year 2003 about National Education System (UU Sisdiknas), every education institution has to independently ensure the quality of higher education which they provide and organize. The assurance of higher education quality is in accordance with the autonomy granted to higher education institutions to manage their education institutions independently. For this aim, the Directorate General of Higher Education begins to implement Quality Assurance of Higher Education gradually in line with the issuance of the Law on National Education System. To assist and support the implementation of quality assurance in higher education, in 2003 the Directorate General of Higher Education issued a Guideline for Quality Assurance in Higher Education, which was then be renewed in 2009 to become a book of Higher Education Quality Assurance System that has been supplemented by good practices in various national education standards to accelerate the implementation of quality assurance at every higher education institution (Ministry of Research, Technology, and Higher Education, 2016). The Indonesian Government fully supports the implementation of quality assurance in higher education institutions by issuing Indonesian Law No. 12 year 2012 about Higher Education (UU Dikti). This law affirms the implementation of the three pillars of the Higher Education Quality Assurance System that has been implemented since 2008. These three pillars are:

- Internal Quality Assurance System (SPMI) that has to be implemented by all higher education institutions;
- External Quality Assurance System (SPME) or accreditation conducted by National Accreditation Body (BAN PT) or other Independent Accreditation Bodies; and
- Higher Education Data Base (PDPT) in the higher education institution levels and in Ministry of Research, Technology, and Higher Education levels.

Further effort from the government to proactively implement the quality assurance in higher education is by publishing regulation No. 50 year 2014 from Ministry of Education and Culture about higher education quality assurance system. This government regulation obligates that all higher education institutions in Indonesia have to implement the higher education quality assurance system in their institutions. In responding to the development of higher education and renewal of regulation in higher education which suits the Regulation No.44 year 2015 (Permenristek no. 44/2015) about national standard of higher education, the Directorate General of Learning and Student Affairs, has compiled the second edition of the Guidelines of Quality Assurance System in Higher Education (SPM Dikti) that has been published in January 2016 (Ministry of Research, Technology, and Higher Education, 2016). Therefore, the quality assurance of higher education in Indonesia can hopefully be really applied in every higher education institution, and active contribution from higher education institutions in escalating their quality of graduates can be really realized.

### **Quality Assurance System in Politeknik Negeri Bandung**

Quality assurance system in Politeknik Negeri Bandung (Polban) has actually been started since this higher education institution established. Polban initially set up the conventional quality assurance system, which performed through internal monitoring and evaluation as the internal quality assurance system and external monitoring and evaluation as the external quality assurance system through accreditation of all study programs. Moreover, the formal quality assurance system was seriously built in 2005 as the response to the UU Sisdiknas year 2003. Since during that period one of the quality assurance systems widely offered and chosen by a lot of education institution is the quality assurance based on ISO 9001, Polban also chose its education quality assurance system based on ISO 9001:2008. The certification of ISO 9001:2008 was granted in 2010 for the whole institution except the Computer and Informatics Department which got their quality assurance system based on ISO 9001:2000 in 2008. In 2008 the quality assurance system of ISO 9001 was still the ISO 9001:2000 version. This Department got ISO certification earlier than other Departments as a result of the Department's



commitment to ensure its high quality of vocational education and also as a result of supporting funding of the A3 Competitive Grand Program, a competitive education enhancement project provided by the Directorate General of Higher Education of Indonesia.

In 2005-2006 Polban started to build its vocational education management system based on ISO 9001:2000 by conducting training about this management system for representative staffs from each Department and Unit. The training provider is the SAI Global, Jakarta. The intensive training conducted several times to obtain high commitment staffs either as auditee representatives or as auditors. The auditee representatives together with its auditors in the same Department or Unit prepared the ISO 9001:2000 documentation and socialized this system in their Department or Unit. Audit internal was then conducted in each Department and Unit by auditors from different Department or Unit to maintain objectivity of the audit.

In 2007-2008, the training and socialization of education management system based on ISO 9001:2000 was continued to be conducted to enlarge involvement of all Polban staffs. The ISO 9001:2000 education system applied by Polban has to be known and understood by all staffs in order to maintain *rolling* of its high quality management system (Rosa & Amaral, 2014). The scope of audit internal was also enlarged to reach units which were not accounted as crucial units to be audited. The success of implementation of a system does not only depend on the top management but also on participation of each staff. During this period, Polban has got 23 trustworthy competence auditor internals and 36 auditee representatives. Every semester, the audit internal of ISO 9001:2000 vocational education system was continued to be conducted in all Department and Units by Quality Assurance Team in the Polban Quality Assurance Unit. To maintain continuous improvement of the system, auditors together with auditee representatives in the same Department or Unit socialized their system for all staffs in the corresponding Department or Unit.

In 2009, Pre External Audit was conducted by SAI Global Jakarta to observe the readiness of Polban in implementing its education management system based on ISO management system. The ISO version was changed to ISO 9001:2008 version during Pre External Audit. This audit was successfully conducted for 10 Departments and all supporting Units in supporting education management system in Polban. Several minors discrepancy obtained by SAI Global could be revised so that the next step of real External Audit was then proposed. During preparation of External Audit, intensive internal audits and following management review meetings were regularly performed. By conducting both activities in each semester, could not only management quality be maintained but also Polban management quality is improved. The principle of ISO management system as other managements systems is maintaining and improving management quality by conducting PDCA (Plan, Do, Check, Act) cycles. By high discipline and tight target to obtained ISO management system certification, therefore, in 2010 External Audit was proposed to be performed. During this year all documentation and fully understanding of all staffs in Polban strengthened by fully support of the Director as the top management and the Vice Director of Academic Affairs as the management representative and all Head of Departments as the vice management representatives, ISO 9001:2008 certification was conducted on 19-21 July 2010. The ISO 9001:2008 certificate was finally granted on 31 August 2010 and would be expired on 30 August 2013.

During 2011-2012, Polban had got used to in maintaining and improving its quality of education management system. Audit internal and management review meetings were always performed following the audits. Strategy of PDCA had been implemented by each Department or Unit during each internal audit. This PDCA strategy was also implemented during external audit of each Study Program in each Department conducted by Higher Education National Accreditation Body (BAN PT). Accreditation as an external audit conducted by BAN PT for each Study Program in Indonesia is a compulsory or obligatory accreditation required by Indonesian government in order to maintain and improve quality of each Study Program in each Department of Indonesian Higher Education Institutions. This accreditation implementation also aims to standardize the higher education quality system in Indonesia and as well as to fulfill the Law No. 12/2012. Such as described above, this governmental law is then put into operation by implementation of regulation of Ministry of Education and Culture no. 50/2014 about Quality Management System in Higher Education.

Such experienced by Polban, Odhiambo (2014) observed that Kenya also experienced that obtaining an effective quality assurance system; it has to be combined between internal quality assurance and external quality



assurance systems. Furthermore, Taiwan obtained that quality assurance influences higher education at least in terms of policy decisions and processes not only in global region but also in national and local regions (glonacal, Enders & Westerheijden, 2014; Hou et al., 2015)

Based on the positive customs through PDCA strategy obtained from ISO system implemented by Polban and demands from the Directorate General of Higher Education in implementing Quality Management System, this vocational institution changed its education management system based on ISO 9001:2008 to the Internal Quality Assurance System which has been proposed by the Directorate General of Higher Education since 2008 (Ministry of Research, Technology, and Higher Education, 2016). By this management system version changing, Polban did not find any hard constrains even Polban did not have to prepare different documentation, one documentation for ISO 9001:2008 and another documentation for study program accreditation. One of the reasons is that Polban has probably developed and achieved quality culture, indicating by changing of attitudes and behavior of all staffs (Stimac & Katic, 2015). Up to now, Polban has been implementing and committing its quality management system based on the internal quality assurance system. Furthermore, the institution accreditation of Polban, which was in B level, could be improved to A level in 2016. This institution accreditation has to be renewed in 2021.

#### Quality Assurance System in Research and Community Services Unit in Politeknik Negeri Bandung

Quality assurance system in Research and Community Services Unit (UPPM) in Polban follows the quality assurance system of the institution. During 2005 to 2010, the quality assurance system of this unit was based on the ISO 9001:2008, the system which was implemented by Polban. During this period, UPPM possessed all ISO documentation, i.e. Quality Manual, Procedures, Work Instruction, and all related Forms supporting all documentation. Based on this successful implementation of quality management system, UPPM was categorized as one of the best units conducting quality management system based on the ISO 9001:2008.

After Polban shifted its quality assurance system to Internal Quality Assurance System, UPPM also followed and fast adapted the institution system. The documentation prepared during the previous ISO system could still be used as the new documentation with a little bit adaptation. The PDCA strategy during ISO system could also be used even though with a different term to further enhance the quality improvement. The new term is Establish, Conduct, Evaluate, Monitor, and Improve (PPEPP) (Ministry of Research, Technology, and Higher Education, 2016). To comply with the new quality assurance version, the quality manual based on ISO 9001:2008 was revised into 8 (eight) standards, i.e. Research Result, Research Content, Research Processes, Research Marking, Researchers, Research Infrastructure, Research Management, and Research Funding Standards. All these standards have to be put into operation by implementation of a document called standard manual. To implement the standard manuals, the PPEPP strategy has to be applied. Therefore, in each standard manual, there are five steps in planning, implementing, evaluating, monitoring, and improving of the standard. In the previous ISO quality documentation, this standard manual is called as a procedure so that all standard manuals are exactly the same as the ISO procedures. The lowest document called supporting forms in this new quality management version are also exactly the same as the forms provided to support ISO quality documentation.

The eight standards with each manual consisting PPEPP steps and completing with supporting forms in each step have been provided by UPPM since 2015. All of the documents are available not only for research activities but also for community services activities. As a supporting unit, UPPM has indirectly contributed to improve the quality of Polban lecturers in fulfilling the other two dharmas/lecturers' activities, i.e. research and community services activities through maintaining and continuously improving its quality management system.

#### Conclusions

- Obtaining an effective quality assurance system implementation in a higher education institution needs to combine both internal and external quality assurance systems, completed with appropriate data base.
- Polban has been successful in shifting its quality management system based on ISO 9001:2008 to the Internal Quality Assurance System.



- Once a quality management customs/culture is obtained, any quality management system can be successfully implemented.

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