

# Quality Policy as a Manifestation of Strategic Plan at Bandung Institute of Technology, Indonesia

Satria Bijaksana<sup>1,2</sup>

Deny Juanda Puradimaja<sup>1,3</sup>

<sup>1</sup>Quality Assurance Unit, Bandung Institute of Technology,  
Jalan Cikapayang 15, Bandung 40116, Indonesia

<sup>2</sup>Physics of Complex System Research Group, Faculty of Mathematics and Natural Sciences,  
Bandung Institute of Technology,  
Jalan Ganesa 10, Bandung 40132, Indonesia

<sup>3</sup>Applied Geology Research Group, Faculty of Earth Sciences and Technology,  
Bandung Institute of Technology,  
Jalan Ganesa 10, Bandung 40132, Indonesia

## Abstract

*Definition of quality in higher education has changed rapidly, especially in the last two decades, when quality assurance has turned into global issue in higher education management. In that context, Bandung Institute of Technology (ITB) has declared ITB Quality Policy 2006-2010 that symbolizes the institutional commitment to improve the quality in guided, continuous, and accountable manner. The Policy was developed based on the evaluation of the previous policy as well as the 2006-2010 strategic plan of ITB. Other than development guidelines on six different areas, the Policy also consists of a set of indicator and targets. In this conference, we will share the lessons learned from the development and implementation of this Policy.*

*Keywords: quality policy, Institut Teknologi Bandung (ITB), higher education*

## 1. Introduction

Institut Teknologi Bandung (ITB) or Bandung Institute of Technology is a public, coeducational research university located in Bandung, Indonesia approximately 150 km from Indonesian capital, Jakarta. ITB is considered as the oldest technology-oriented university in Indonesia. Its predecessor, *De Technische Hogeschool te Bandung* (THB), was established in 1920. Indonesia's first president, Sukarno, earned his engineering degree in civil engineering (concentrating in Architecture) at this institution. After a series of change driven by political turmoil, such as the Second World War and the War of Indonesian Independence, on March 2, 1959, Sukarno, now as Indonesian President inaugurated the establishment of Institut Teknologi Bandung on the campus of old THB.

With annual enrollment of about 4100 students (3000 undergraduate, 1000 master, and 100 doctoral), ITB has been among the first choice of college applicants to enter higher education in Indonesia. It was ranked first in terms of student selectivity by the Asiaweek's Asia's Best Science and Technology Schools survey (ITB's overall rank is 21st). In a global survey of the Times Higher Education Supplement-Quacquarelli Symonds (THES-QS), released at 5 October 2006, ITB was placed on the 258th among other universities around the globe. ITB offers 34 academic programs at undergraduate level as well as 38 programs at master level and 22 programs at doctoral level in all fields of sciences, engineering, technology, visual arts, and management.

In the year 2000, status of ITB with three other state universities (University of Gadjah Mada, University of Indonesia, and Bogor Agricultural University) was transferred into *Badan Hukum Milik Negara* or BHMN (literally, it means state owned legal entity). This status has no precedent in the history of higher education in Indonesia. With the new status, ITB and other BHMN universities (there are now seven universities with this status) have more independence, autonomy, and responsibility in carrying on their missions. With this new status, ITB has decided to turn itself into a Research and Development University where sciences and technology are being developed to support the needs of national development. Quality Policy is a mean of transforming ITB from its present condition into a World Class Research University.

## 2. Development of Quality Policy

The ITB Quality Policy 2006-2010 is an institutional commitment to improve its quality in continuous, focused, and accountable manner. The Quality Policy consist of quality improvement policies in six different areas, namely, education, research, human resource development, community services based on research expertise, students services, and management services. The Policy was initiated by ITB's QA Unit or *Satuan Penjaminan Mutu/SPM* and was then declared as ITB Quality Policy 2006-2010 by Rectors' decree No. 202/2006. The Policy was developed from the evaluation of its predecessor (ITB Quality Policy 2004-2006), ITB quality indicators of 2002-2006, ITB Strategic Planning 2006-2010, and report on the try out of ISO 9001-2000 structure at Faculty of Earths Sciences and Mineral Technology. This evaluation was being enriched by research on quality aspects in Government Regulation No 155/2002 that transform ITB status into a BHMN university, in ITB's bylaws, and in the decrees of Academic Senate.

The development of ITB Quality Policy was also based on thorough research on the Laws of the Republic of Indonesia No. 14/2005 on Teachers and University Professors, Government Regulation No. 19/2005 on National Educational Standard as well as the HELTS (*Higher Education Long Term Strategy*) 2003-2010 document from the Directorate General of Higher Education. At international context, reference was also being made to literature on quality and accountability in higher education (such as Bogue and Hall, 2003; Brown, 2004). Some inputs we also derived from research on program accreditations (such as ABET and EQUIS) and management certification (such as ISO). Last but not least, some other inputs to the development of ITB Quality Policy were derived from the analyses and results of world university ranking systems, such as the Academic Ranking of World Universities by Shanghai Jiao Tong University, THES-QS World University Rankings and Webometrics Ranking of World Universities.

Further inputs were also obtained from the roadshows by the QA Unit or SPM to faculties and schools as well as from the Quality Commission that consist of representatives from faculties and schools. The first draft of the ITB Quality Policy was distributed to Deans, Heads of Academic Programs, and Heads of Research Groups. Two special workshops to discuss the draft were held subsequently on October 4 and 11 of 2006. The workshops were attended by the Rector, Vice-Rectors, Deans, Heads of Academic Programs, and Heads of Research Groups. Rector's decree that formalize the adoption of ITB Quality Policy 2006-2010 was signed on November 15, 2006.

Apart from quality improvement policies, the ITB Quality Policy 2006-2010 is also supplemented by quality targets and indicators. The targets and indicators were derived from the analyses ITB's current and projected achievement. To some extent, the projected achievement was derived from standard of world university ranking systems. With these targets and indicators and through MAE processes (Monitoring, Assessment, and Evaluation) on quality improvement activities, the administration could measure the relative position of ITB at any given time from achieving its vision.

### 3. Six Areas of Quality Policy

#### *Education*

Education programs offered by ITB should be of high academic quality and should be based on research and expertise developed by ITB faculty members. As ITB is transforming itself from teaching-based university into research-based university, learning methods gradually will be sifted from teacher-centered learning into learner-centered learning where students should have greater role and responsibility. This change in educational method requires integration between undergraduate and graduate programs. All education programs should be executed in planned and orderly fashion, therefore majority of students should be able to graduate on time. Moreover, education programs at ITB should be comparable to similar programs at reputable universities. Thus, education programs at ITB should be gradually accredited, not only by national accreditation board but also by international accreditation board.

A reputation of world-class universities is also reflected partially in the presence of international students. In the near future, ITB plans to attract international students (at present, number of international students at ITB is only about 1% of student body). The plans include providing full scholarships for international graduate students. A reputation of ITB also depends on the employability of its graduates. Thus, academic programs and non-academic programs are provided by ITB to ensure that its graduates could compete internationally. Last, the reputation of ITB depends also on publication of students' research. ITB should therefore provide means to facilitate the publication and communication of students' research.

#### *Research*

Research at ITB, which is an obligation of each individual faculty member, is intended to not only contributing to the development of science and technology, but also finding solutions to problems in national development. ITB should facilitate research initiatives and activities, so that the outputs of ITB's

research are of international standard. Gradually, results from fundamental research should be published at peer-reviewed international journals, while products of technology development and art, should receive wider acceptance from the society. Research should be embedded in education program at all levels (undergraduates, masters, doctors) and should be well funded either from external or internal sources. Percentage of budget allocated for research should be increased. Within 2004-2014, five research areas have been given priorities for funding. These five areas are alternative energy, biotechnology, environmental management and water resources, arts and design, as well as information technology.

#### *Community Services based on Research Expertise*

As a university, ITB has a mandate to contribute to the wellbeing of Indonesian society through community services. These services could take various forms, from empowerment of society to professional services to Indonesian government and private sectors. These services should be based on competence and research products developed at ITB. Community services should also inspire and enrich academic programs. Development of expertise at research groups should, among others, be based on prospect of serving the needs of the society. Within the next few years, services by ITB are to be increased, both in number and in quality. Units within ITB, from research groups, research centers, faculties and schools, to SUK (*Satuan Usaha Komersial* or Unit of Commercial Venture) are required to develop forms and packages of services that could be used to solve the actual problems faced by the society.

#### *Human Resources Development*

To achieve its vision, ITB should make a clear plan of the development of its human resources. Apart from improving the qualification of its faculty members, strategic plan should also be placed to improve the promotion as well as the assignment. From 2006 to 2010, the percentage of faculty members with doctoral qualification would be increased from 60.3 to 80%. Gradually, ITB would facilitate those faculty members without doctoral qualification to pursue doctoral programs either at home or abroad. Faculty members with strong performance would be promoted in line with ITB's needs. To develop their expertise and to expand their research networks, ITB would facilitate its qualified faculty members to carry out joint research or research collaboration with their colleagues both at home and abroad. Chance for sabbatical leave would also be given selectively in accordance with ITB's plan, needs, and criteria.

Apart from support from its faculty members, ITB also needs support from qualified non-academic staff. Thus, performance of non-academic staff is also to be monitored. Based on the results of this monitoring process, ITB would provide trainings and courses to improve the performance and qualification of its staff. Promotion and remuneration would also be given based on performance.

#### *Student Services*

Student programs and student activities at ITB are considered as an integral part of educational processes. The programs and activities are directed to provide students' welfare services, to strengthen students' academic and professional ability, to develop students' talent, attitude, and personality, and to

provide career services. As a part of ITB's academic society, students are expected to involve and participate in the planning, organization, implementation, and evaluation of students' programs and activities. Such programs and activities are organized by the Vice Rector for Student and Alumni Affairs. With the next few years (2006-2010), the programs and activities are geared to improve the quality of student services as well as to improve the academic and professional achievement of students. The programs and activities are also intended to improve students' performance in competition both at national as well as at international levels, and to improve the competitiveness of graduates in competing for jobs or for chance to study further.

#### *Management Services*

To implement the academic activities, ITB requires reliable management and administration support. Thus, all administrative and management units will be integrated into a system of ITB Management Services. This system places customer satisfaction and accountability as its priorities. This system requires that planning and budgeting systems will be based on quality targets and indicators. To improve customer satisfaction, ITB Management Services should be friendly, integrated, accurate, and timely. Each unit should be equipped with help desk, IT-based information system, and mechanisms to handle complaint. To improve the accountability, each unit should use ITB Quality Policy as reference on planning and evaluation as well as on utilization of resources. Several administrative units will be asked to prepare themselves for international certification, such as ISO-based certification.

#### **4. Indicators and Targets**

ITB Quality Policy 2006-2010 is equipped with 30 (thirty) indicators and targets so that the implementation of this Policy could be monitored from time to time. The indicators and targets are listed in the Appendix. Nine of the indicators (No. 1 to 9) are related to policy in the field of education while four indicators (No. 10-13) are related to policy in the field of research. The remaining 19 are related to community services (No. 14-15), human resources development (No. 16-19), students services (No. 20-22), and management services (No. 23-30). The targets are set based on the actual condition at 2006 and the trend of improvement. Some targets are set to meet the standard of well-reputed universities.

#### **5. Some Aspects of Implementations**

Since its formal inception in 2006, ITB Quality Policy 2006-2010 has been implemented in various aspects. First, the policy has been adopted by units within ITB to formulate its annual planning and budgeting. Quality indicators have been used as a measure of success in the proposed programs and activities. Programs such as international accreditation for academic programs, recruitment of international students, certification of management, and allocation of ITB's own research grants are now common things. Second, indicators and targets of this policy have been used as bases for quality assessment. Based on the results of the assessment, recommendations were made to Rector and senior management on steps and action that need to be taken to ensure that ITB could achieve its quality targets. Third, quality assessment is now being developed into ITB's internal accreditation scheme. This scheme is important for ITB and three other BHMN universities that had been given a special authority by the Ministry of National Education to open up or to close down their own academic programs without consulting the Directorate General for Higher Education.

#### **6. Conclusion**

ITB uses its Quality Policy of 2006-2010 as a mean to transform itself into a future World-Class Research University. The Policy was derived from analyses of both internal and external findings. The Policy covers six areas, namely education, research, community services based on research expertise, human resources development, students' service, and management services. The policy is equipped with thirty indicators and targets that can be used to measure the closeness of ITB from achieving its vision. The Policy is now in effect and has been implemented in various stages of development. It is, of course, too early to claim the success of this policy. However, change in minds and in attitudes has been observed at ITB.

#### **References**

Bogue, E. G., and Hall, K. B. (2003), *Quality and Accountability in Higher Education*, Praeger Publisher.  
Brown, R. (2004), *Quality Assurance in Higher Education: The UK Experience since 1992*, Routledge Falmer.

#### *Laws and Regulations*

- 1 Undang-undang Republik Indonesia Nomor 14 Tahun 2005 tentang Guru dan Dosen (Laws of the Republic of Indonesia No. 14/2005 on Teachers and University Professors, downloadable at [http://www.imhere-dikti.net/e107\\_files/public/uu\\_guru\\_dan\\_dosen.pdf](http://www.imhere-dikti.net/e107_files/public/uu_guru_dan_dosen.pdf))
- 2 Peraturan Pemerintah Republik Indonesia Nomor 19 Tahun 2005 tentang Standar Nasional Pendidikan (Regulation of the Government of the Republic of Indonesia No 19/2005 on National Education Standard, downloadable at <http://www.presidentri.go.id/DokumenUU.php/104.pdf>)
- 3 Peraturan Pemerintah Republik Indonesia Nomor 155 Tahun 2005 tentang Penetapan Institut Teknologi Bandung sebagai Badan Hukum Milik Negara (Regulation of the Government of the Republic of Indonesia No 155/2005 on The Induction of Institut Teknologi Bandung as State Owned Legal Entity, downloadable at [http://www.indonesia.go.id/id/produk\\_uu/isi/pp2000/pp155-2000.html](http://www.indonesia.go.id/id/produk_uu/isi/pp2000/pp155-2000.html))
- 4 Anggaran Rumah Tangga Institut Teknologi Bandung Badan Hukum Milik Negara (Bylaws of ITB BHMN, downloadable at <http://web.itb.ac.id/mwa/art.pdf>)
- 5 Basic framework for higher education development, KPPTJP IV (2003-2010) (Directorate General for Higher Education, Ministry of National Education of the Republic of Indonesia, downloadable at <http://www.dikti.org>)
- 6 Kebijakan Mutu Institut Teknologi Bandung 2006-2010 (ITB Quality Policy 2006-2010, downloadable at <http://www.spm.itb.ac.id/static/legal.html>)

#### *Accreditation, Certification, and World University Ranking*

- 1 ABET (Accreditation Board for Engineering and Technology) (<http://www.abet.org>)
- 2 Academic Ranking of World Universities by Shanghai Jiao Tong University (<http://ed.sjtu.edu.cn/ARWU-FIELD.htm>)
- 3 Asia's Best Universities (<http://www.asiaweek.com/asiaweek/features/universities2000/index.html>)
- 4 EQUIS (European Quality Improvement System) ([http://www.efmd.org/html/Accreditations/cont\\_detail.asp?id=040929rpk&aid=041029wupz&tid=1&ref=ind](http://www.efmd.org/html/Accreditations/cont_detail.asp?id=040929rpk&aid=041029wupz&tid=1&ref=ind))
- 5 Times Higher Education Supplement Quacquarelli Symonds (THES-QS) World University Rankings (<http://www.topuniversities.com>)
- 6 Webometrics Ranking of World Universities (<http://www.webometrics.info>)

## Appendix

### List of Indicators and Targets of ITB Quality Policy 2006-2010

1. Percentage of courses adopting methods that could be classified as learner-centered education. (Target 2010: 50%)
2. Percentage of undergraduate programs that are integrated with graduate programs (through programs such as fast-track and honors). (Target 2010: 80%)
3. Percentage of undergraduate programs that receive international accreditation. (Target 2010: 30%)
4. Percentage of foreign students. (Target 2010: 2%)
5. Percentage of graduates (of undergraduate programs) that find employment within the first year after graduation. (Target 2010, 90%)
6. Percentage of graduates who complete their programs timely. (Target 2010: 80% (Bachelor), 80% (Master), 60% (Doctor))
7. Percentage of undergraduate thesis that are presented at national conference or published at national journal. (Target 2010: 50%)
8. Percentage of master thesis that are published at nationally accredited journal. (Target 2010: 80%)
9. Percentage of doctoral dissertation that are published at refereed internationally journal. (Target 2010: 80%)
10. Number of publication at refereed international journal (IJ) and at nationally accredited journal (JN) (normalized by the number of faculty members) (Target 2010: 50% for international journal, 100% for national journal)
11. Average Citation Index for individual faculty member. (Target 2010: 15). Note: The actual target of this indicator is being reviewed to facilitate the use of <http://isiknowledge.com>, instead of <http://scholar.google.com>.
12. Number of ITB patent (accumulative). (Target 2010: 115)
13. Research Fund available at ITB, both from internal and external sources. (Target 2010: 80 billion rupiahs. As of September 2007, the exchange rate is about 9400 rupiahs for one US dollar)
14. Number of expertise-based project with values exceeding 500 million rupiahs (Target 2010: 120. As of September 2007, the exchange rate is about 9400 rupiahs for one US dollar)
15. Amount of fund collected from expertise-based programs and activities through ITB's Research Institute and Commercial. (Target 2010: 150 billion rupiahs (Research Institute), 200 billion rupiahs (SUK). As of September 2007, the exchange rate is about 9400 rupiahs for one US dollar)
16. Percentage of faculty members with rank of full-time professor. (Target 2010: 15%)
17. Percentage of faculty members with doctoral degree. (Target 2010: 80%)
18. Percentage of faculty members who attend staff development program in the form of sabbatical leave or research collaboration annually. (Target 2010: 15%)
19. Percentage of academic and non-academic staff with KPI (Key Performance Index) of more than 3.00 in 1 to 4 scale. (Target 2010: 90% (academic staff), 85% (non-academic staff))
20. Average level of students' satisfaction on student services (in 1 to 4 scales). (Target 2010: 3.25)
21. Percentage of successful participation of ITB student's teams in international (IC) as well as in national competition (NC). (Target 2010: 50% for IC, 50% for NC)
22. Ratio of achievement-based scholarship over all type of scholarship for undergraduate students. (Target 2010: 10%)
23. Number of services or systems that receive international certification. (Target 2010: 10 (ISO), 10 (other type of certification))
24. Number of Quality Improvement Programs implemented in units and offices that have positive impact on quality management system. (Target 2010: 75)
25. Correspondence between proposed activities (in the Annual Budget and Activity Plan) with quality target as prescribed in the Quality Policy. (Target 2010: 90%)
26. Percentage of management services that receive CSI (customer satisfaction index) of more than 80%. (Target 2010: 80%)
27. Percentage of management services that apply standard processing time for their services. (Target 2010: 80%)

28. Down-time of ITB's IT system (Down-time of 1% per month means that the system is off-line in less than 7 hours). (Target 2010: 0.5%)
29. Minimum frequency of website updating. (Target 2010: 1 week for ITB, Faculties and Schools; 2 week for Study Programs, Research Groups)
30. Organizational Communication Scale of ITB both internally and externally (in 1 to 7 scale) (Target 2010: 5)