

Research Article

**Strategies to Improved Education Quality in Indonesia: A Review**

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**Abstract**

A good and quality education system will produce quality human resources who can compete in the international world. Education is the main foundation in the formation of human resources so that it can strength then the resilience of the nation and state. However, it cannot be denied that the quality of education in Indonesia is still far from expectations when compared to other more developed countries. The results of the Political and Economic Risk Consultancy (PERC) survey conducted in 2000 regarding the quality of education in the Asian region, Indonesia was ranked 12th behind Vietnam. Based on the Human development index Ranking 2019, Indonesia is ranked 111 out of 189 countries. This article will present the problems faced in the world of higher education in Indonesia. Several factors that affect the level of education quality include curriculum, educational policies, educational facilities, application of information and communication technology in education, affordable education costs, education management, and human resources. So that the solution to the solution is to make efforts to improve the curriculum, educational facilities, and educational management.

**Keywords:** *Quality education system, educational policies, educational-management, and human resources.*

**Introduction**

Educational quality is the most important objective for the management of the nation's education system, which expects educational institutions to be competent and prepared to provide their people with an equal and thorough education service. The education they receive must be up to standard and meet all the requirements of the local community properly and effectively (Ajpru, Wongwanich, & Khaikleng, 2014). The Indonesian education system has undergone a great deal of transformation from the pre-colonial and colonial era through the early years of independence to the present day (Faisal & Martin, 2019). In the Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System, it is stated that education is a conscious and planned effort to

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create an atmosphere of learning and the learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality intelligence, noble character, and skills needed by him, society, nation and state (Government of Republic of Indonesia, 2003).

The three main ideas contained therein, namely: (1) conscious and planned effort, education as a conscious and planned effort, shows that education is a deliberate and thoughtful process (intellectual work process), the desired education is developmental and humanistic education, which seeks to develop all the potential of students, not the formation of behavioral styles, (2) creating an atmosphere of learning that enables students to actively develop their potential; and (3) possessing spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves, society, nation and state. In other words, education is not secular education, not individual education, and not social education, but education, which seeks to strike a balance between these three dimensions (Jahari, 2020). National education is education based on Pancasila and the 1945 Constitution of the Republic of Indonesia, which is rooted in religious values, Indonesian national culture and responsive to the demands of the times (Government of Republic of Indonesia, 2003; Kurniawan, 2018).

Academic quality improvement in higher education has recently been considered in many universities around the world (M. H. Yarmohammadian, Mozaffary, & Esfahani, 2011). In a changing world that is increasingly creating uncertainty, all higher education institutions should provide a favorable response to social needs. Experience has shown that universities can provide the best services to the community if they are concerned with continuous improvement in the quality of their services (Weber, 2003; M. Yarmohammadian, 2004). Along with the times, the level of public education has increased. Therefore education in higher education is very important for the community. The universities have a major role to play in the growth and development of scientific, cultural and human resources (Chalaris, Gritzalis, Maragoudakis, Sgouropoulou, & Tsolakidis, 2014). Professional higher education planners should identify their weaknesses and strengths and accelerate scientific developments and be responsible for the educational needs at national and global level, as well as for the continuous improvement of the quality of education processes and programs (M. H. Yarmohammadian et al., 2011). Higher education with its products in the form of educational services is an institution that functions as a place to organize education or teaching, research, and community service (UNESCO, 1998). Parties who can always make changes towards progress will certainly be winners in a competition. One of the efforts to do this is to develop quality assurance in higher education. With this quality assurance, it is hoped that a quality culture will grow, starting to set standards, implement standards, evaluate the implementation of standards, and continuously strive to improve standards (Rifa'i, Permana, Komariah, & Sudarsyah, 2019; Vykýdal, Folta, & Nenadál, 2020).

Educational quality assurance performs an important role in the development of the quality of education for each system. It is therefore important to ensure the quality of education processes and to identify the means by which they can be validated and improved in order to provide quality education (Chalaris et al., 2014). Quality education is one of the key responsibilities of any university to its stakeholders, not only in terms of the requirement to produce a high level of knowledge, but also in terms of the need to provide education efficiently so that they can achieve their intended objectives (Yadav & Pal, 2012). The National Education Act 1999 sets out the educational reform by providing a quality assurance system for each educational institution consisting of internal and external

quality assurance systems. Every educational institution to manage its education must prove worthy of the quality assurance system of education (Ajpru et al., 2014). However, it cannot be denied that the quality of education in Indonesia is still far from being expected, when compared to other more developed countries. The formal education system that was originally designed to nurture the character and potential of individuals is failing because there is too much concern about standardization and procedures. It's not to say that standardization policy is a bad thing. However, many educational efforts are currently dominated by a concern for management rather than teaching (Rustiadi, 2015).

The results of the Political and Economic Risk Consultancy (PERC) survey conducted in 2000 on the quality of education in the Asian region, Indonesia was ranked 12 countries behind Vietnam. Besides, the quality of tertiary institutions in Indonesia is still low, which ranks behind compared to universities in the Asian region (Hadis & Nurhayati, 2012). Since 2000, the Organization for Economic Co-operation (OECD) has conducted a Program for International Student Assessment (PISA) test, which is an international study of the reading, mathematic, and science literacy achievements of 15-year-old school students (Chamisah, 2017; OECD, 2005, 2013). PISA is a study that is held every three years, namely in 2000, 2003, 2006, 2009, 2012 and so on (OECD, 2013). Indonesia has started to participate fully since 2001. Ever since, performance in science has fluctuated but remained flat overall, while performance in both reading and mathematics has been hump-shaped. Reading performance in 2018 fell back to its 2001 level after peak performance in 2009, while mathematics performance fluctuated more in the early years of PISA but remained relatively stable since 2009. However, these results need to be seen in the context of the vast progress that Indonesia has made in increasing enrolment.

In 2001, only 46% of 15-year-olds in Indonesia were sampled by PISA; in 2018, 85 percent of 15-year-olds were sampled. It is often the case that the strongest students remain in education, and that students who have not been educated and have been brought into the school system are weaker than those who were already included. If the education system had not improved, the inclusion of more students would be expected to reduce the average performance and the distribution of performance. In that light, Indonesia has been able to improve the quality of its education system by maintaining education standards over its participation in PISA (OECD, 2019a). PISA not only provides information about international benchmarks (Wagner, Hahn, Schöps, Ihme, & Köller, 2018) but also information about the weaknesses and strengths of students and the factors that influence them (Argina, Mitra, Ijabah, & Setiawan, 2017; OECD, 2017, 2019b).

According to the PISA report, Indonesian students' average reading performance score of 371 in 2018 marks a 21-point drop from their 2015 score and puts Indonesians well below the OECD average of 487 (APO, 2020). Meanwhile, in mathematics, the study provides Indonesian students scored 379, down 7 points from 2015, while the average science score declined slightly, dropping to 396 points from 403 achieved in 2015 (APO, 2020). Both scores are also well below the OECD average of 489. PISA's results in 2018 in the category of reading skills, Indonesia ranks 74th out of 79 countries, while Indonesia ranks 73rd and 71st out of 79 participating PISA countries in the assessment of math and science skills (Hewi & Shaleh, 2020). With this score, Indonesia is behind Singapore, Malaysia, Brunei Darussalam and Thailand. When Indonesia first participated in PISA in 2001, the sample covered only 46 percent of 15-year-olds, while in the 2018 report, the PISA sample covered 85 percent of

15-year-olds in the country (OECD, 2019a). Based on the Human development index ranking in 2019, Indonesia was ranked 111 out of 189 countries (UNDP, 2019). This article will present the problems faced in the world of higher education in Indonesia and discuss the problems faced in the world of education in Indonesia and strategies to improve the quality of education in Indonesia, especially tertiary education so that they can align themselves with other more developed countries.

## Discussion

### Factors Affecting Education Quality

Improving the quality of university education is an integral part of discussions in the management of higher education in all countries. The University, as the main organization for the development of expert human resources, plays an important role in achieving sustainable development in the age of globalisation (Damirchili & Tajari, 2011). The quality of the university system has been considered from different points of view. With a growing desire to make higher education systems more effective and efficient, the policy of evaluating tertiary institutions has been stepped up in both developed and developing countries. The three main factors that have influenced the higher education system over the last decades include socio-economic change, technological change and the shift towards globalisation. These are the changes that make the higher education system more efficient and effective (Bazargan, 1999). However, not all higher education systems pay sufficient attention, especially for systems in developing countries, because of the need to decide on the traditional objectives of the university, which are defined as methodical discovery and teaching the truth about serious and important issues (Shils, 2008).

Some experts believe that the quality of the education system is synonymous with its internal efficiency; they define the internal efficiency of the system based on four components, including input, process, output and output, with predetermined standards for improving the quality of higher education activities (Bazargan, 2009). Some of the factors that influence the quality of education in tertiary institutions are a). Governance b). Community service, c). Study program curriculum, d). Learning process, e). Human resources (lecturers, employees, students), f). Academic atmosphere, g). Research and development, h). Student affairs, i). Finance (Allam, 2018; Díez, Villa, López, & Iraurgi, 2020). While other factors are a). Education policy, b). Education facilities, c). Application of information and communication technology in education d). Affordable education cost e). Education management, and f). human resources of the education stakeholders (OECD, 2010).

The Government, as mandated by the Law on the National Education System, has issued Government Regulation 19 of 2005 on National Education Standards, establishing an Agency for National Standards in Education or ANSE/BSNP (Badan Standar Nasional Pendidikan). ANSE is an independent and professional body with a mandate to develop national education standards and to monitor and evaluate their implementation. In 2015, National Education Standards were amended by Government Regulation 13 of 2015 (SNP, 2015). National standards have been developed as a follow-up to Law 20/2003 of the National Education System, which stipulates that all providers of education must comply with national standards. Standards have been developed through a

lengthy and rigorous consultation process with relevant stakeholders. External quality assurance arrangements, which are sufficiently robust to satisfy stakeholders and social partners, are essential if trust and confidence in qualifications are to be established.

External assessment requires standards set by external parties as stakeholders. The following standards are considered to be the core framework of the standards developed by the ANSE, as laid down in the Government Regulation on National Education Standards (Kemendikbud, 2020): 1) Content standard is the scope of materials and competence level comprised in the criteria of graduate competence, materials competence, subject competence, and learning syllabus that must be fulfilled by learners at a particular educational level and type; 2) Process standard is the education national standard related to the learning process at a particular education level to achieve graduate competence standard; 3) Standard for teacher and education staff is the criteria of pre-service education as well as physical and mental appropriateness, and in-service education; 4) Standard for facilities and infrastructure is the education national standard related to the minimum criteria of the classroom, sports center, worship room, library, laboratory, workshop, playground, recreation ground, and other learning sources, which are required to support the learning process, including the use of information and communication technology; 5) Management standard is the education national standard related to the planning, implementation, and monitoring of the education activities at education units, region/city, province, or national to create efficiency and effectiveness in the implementation of education; 6) Financing standard is the standard that regulates the components and the expenses of operating costs at the education unit for a year; 7) Assessment standard is the education national standard related to the assessment mechanism, procedure, and instrument of learners' learning result; 8) Operating cost of the education unit is a part of the education budget required to finance operational activities of the education unit to carry out education activities according to education national standard regularly and continuously; 9) Curriculum means a set of plans and regulations about the aims, content and learning materials as well as the method employed as the guidelines for the implementation of learning activities to achieve particular-education objectives.

The National Higher Education Standards are the national reference for minimum higher education services regulated by Regulation 44 of 2015 of the Ministry of Research, Technology and Higher Education. The national standards set out in the Higher Education Act cover eight aspects, namely content, skills of graduates, lecturers and support staff, and infrastructure, learning, management, assessment and finance processes (Kemendikbud, 2020). Based on the elaboration, the government has built foundations and steps to achieve quality national education with predetermined standards. This means that if the implementation of the learning and education process is below the standards, the education quality will be inevitably far from expectation.

### **Education Problems**

Indonesia's biggest challenge in terms of education is no longer improving access but improving quality. The Indonesian Government hopes to develop a world-class education system by 2025 (Rosser, 2018). Indonesia has made great strides in improving access to education over the last few decades. However, relatively little progress has been made in improving the quality of education and learning outcomes. Assessments of the country's

education system suggest poor quality of education, poor learning outcomes, inadequate facilities, and disciplinary problems (OECD & ADB, 2015). The results of higher education have not been any better. Recent assessments of the country's higher education system suggest that it continues to produce graduates who lack the skills needed by employers, in particular those required for professional and managerial roles. Nor does it provide the necessary research needed to support innovation (Hill & Wie, 2013; OECD, 2011; Suryadarma & Jones, 2013; Welch, 2007).

Several important notes regarding problems in the education sector which are identified by a national education observer are as follows (Hutasuhut, 2019):

1. Facilities and infrastructure education
  - a. From the entire schools in Indonesia, 90,749 classrooms are heavily damaged, and 60,760 classrooms are totally damaged (Sudarwati, 2017)
  - b. From 214,409 elementary schools/junior high schools/senior high schools (public and private), only 144,293 schools have a library. From 144,293 libraries, 6,436 libraries are heavily damaged, and 5,529 libraries are totally damaged (Sudarwati, 2017).
  - c. From 214,409 elementary schools/junior high schools/senior high schools (public and private), only 50,150 schools have a science laboratory (Sudarwati, 2017).
  - d. The condition of schools and classrooms that does not meet the facility standard, learning comfort, safety (due to the damaged condition), and students' health. This breaks the rule of PERMENDIKNAS No. 24 of 2007 on the facilities and infrastructure (Sudarwati, 2017).
  - e. There have been disputes of the school land/building with the landlord which lead to the hindering of the teaching-learning process (Sudarwati, 2017).
2. Access to school from the students' house in rural areas is limited by distance, transportation, safety, and lack of damaged infrastructure (such as bridge and road) (Hutasuhut, 2019).
3. Not well-selected textbooks. Many textbooks do not meet good pedagogical criteria, and there are printing errors (Hutasuhut, 2019).
4. Basic learning materials at schools should be the same. To minimize the expense for books, should the government build a non-profit company to produce all basic textbooks for free/cheap at schools? And should the government let commercial publishers produce additional books? (Hutasuhut, 2019).
5. A frequently occurred problem in the practicum activities is related to the cost. How do the government help schools deal with this issue? (Hutasuhut, 2019).
6. Many schools do not/do not optimally use supporting tools for learning (such as realia, projector, multimedia, etc.) due to the cost (Hutasuhut, 2019).

### **Problems of Higher Education According to Critics from International Community**

Based on the QS Stars World University Ranking 2018: Universitas Indonesia Jakarta (292), ITB (359), Universitas Gadjah Mada (UGM) Yogyakarta (391), Universitas Padjadjaran (UNPAD) Bandung (651-700), Institut Pertanian Bogor (IPB) Bogor (701-750), Universitas Airlangga (UNAIR) Surabaya (751-800), Universitas Diponegoro (UNDIP) Semarang, Institut Teknologi Sepuluh Nopember (ITS) Surabaya, Universitas Brawijaya

(UNIBRAW) Malang (800-1000). However, in the QS Stars World University Ranking 2020, UGM ranked 254 (from 391), ITB ranked 313 (from 359), while Universitas Indonesia ranked 305 (from 292), UNPAD ranked 8000-1000 (from 651-700) (QSWUR, 2018). Comparing to Singapore, NUS ranked 11, NTU ranked 13, Malay, Universiti Malaya ranked 59, Universitas Kebangsaan Malaysia ranked 141. Thailand, the University of Mahidol ranked 252. Compared only to Southeast countries, Indonesia is left behind. (Rankings, 2020) The more pathetic fact is that there is no university in Indonesia included in the best universities according to Academic Ranking of World Universities 2019 released by Center for World-Class University in Shanghai Jiao Tong University (CWCU, 2019).

The list of best 10 universities in Asia 2020 according to QS World University Rankings: 1) National University of Singapore (NUS); 2) Nanyang Technological University (NTU); 3) University of Hongkong; 4) Tsinghua University; 5) Peking University; 6) Zhejiang University; 7) Fudan University; 8) The Hong Kong University of Science and Technology (HKUST); 9) Korea Advanced Institute of Science and Technology (KAIST); 10) The Chinese University of Hong Kong (CUHK). Then, where is the position of Indonesian universities? Universitas Indonesia ranked 59 in Asia, ITB=66, UGM=70, UNAIR=171, ITS=198, UNPAD=236, the others are obviously far below (QSWUR, 2020).

QS World University Ranking has released the rank of worldwide universities. Below are the best 10 universities in South East Asia 2020: 1) Nanyang Technological University (NTU); 2) National University of Singapore (NUS); 3) Universiti Malaya (UM); 4) Universiti Putra Malaysia (UPM); 5) Universiti Kebangsaan Malaysia (UKM); 6) Universiti Sains Malaysia (USM); 7) Universiti Teknologi Malaysia; 8) Chulalongkorn University Thailand; 9) Universitas Indonesia (UI); 10) Universiti Brunei Darussalam (UBD) (Salikha, 2019). In Southeast Asia, Universitas Indonesia represents one of the Indonesian universities which ranks 9 out of 10 best universities. Malaysia is represented by four universities, and Singapore is represented by two universities as the two best universities.

Observing the rank based on the journal publication as released by Scimago Journal and Country Ranking, Indonesia is in the 47<sup>th</sup> position among all countries in the world. In Southeast Asia, Indonesia is below Malaysia which is in the 33<sup>rd</sup> position, and Singapore is 34<sup>th</sup>. In Asia, Indonesia is in the 11<sup>th</sup> position out of 33 countries in Asia. This position is below Thai, Malaysia, and Singapore, but one place above Vietnam (SJR, 2021). Considering the ratio of Indonesians, including the number of university students, Indonesia undoubtedly has the greatest number of students and universities, however, the question is, the academic rank and the number of reputable international journal publication is far behind the other countries in the world, even in Asia and South East Asia. This is concerning and pathetic. A great country with its human resources and natural resources, but in terms of education, it is left behind neighboring countries. This becomes our responsibility as a nation to actively contribute to the improvement of education and human resources to be able to stand equally with other countries in the world.

### **Definitions and Perspectives of Quality**

It is not an easy task to define what quality is accurate. However, quality in general can be defined in detail. From TQM (total quality management) perspective, quality is viewed more comprehensively or holistically, quality does not only lie in the results but also in the process, environment, and human resources. This kind of perspective is elaborated in detail by Goetsch and Davis, defining quality as “a dynamic condition related to products, services, human resources, processes and environment that requires or exceeds the expectation” (Goetsch, D. L., Helba, S., & Davis, 1994; Psychogios & Priporas, 2007). Research conducted by Joseph on students ‘perspective of university service quality in New Zealand revealed seven primary determinants, they are program issues, academic reputation, physical aspect/cost, career opportunity, location, time, and other factors (Joseph, 1998). Meanwhile, research by Hampton on the same topic in a university in the US identified seven determinants of university service quality: education quality, teaching-learning activity, university social life, and students’ counseling (Hampton, 1993).

Regarding the definition of quality from the perspective of the company’s products, there are various definitions from quality management experts:

1. Product quality refers to the fitness of product used to fulfill the needs and costumers’ satisfaction based on five dominant characteristics, they are (a) technology (b) psychology, which is taste or status; (c) time, which is the reliability; (d) contractual, whether there is a guarantee; and (e) ethics, which is politeness (Juran, 1993).
2. Quality is the fitness with market demand or the customers. A quality company is a company that can control the market because the products are in line with the customer’s needs, thus, it creates customer satisfaction (Deming & Edwards, 1982).
3. Quality is a dynamic condition related to the products, workers, processes, tasks as well as environments that fulfill or exceed customers’ expectations (Goetsch, D. L., Helba, S., & Davis, 1994).

Based on the definition of quality as explained by the management experts, it can be concluded that there are four important points, i.e the excellence, the fitness of the function, condition fulfillment, and satisfaction. The excellence of the quality is not limited to concrete things, instead, it is more to the ideal nuance of one’s thought. Quality is very subjective because a fact cannot declare itself as having the good quality or not unless it is given subjective meaning by a person who observes, feels, or makes it.

### **Measuring Education Quality**

Is measuring the quality of a company’s products considered the same a measuring the quality of higher education? Although higher education is also inseparable from the institutions offering education services. Similar to a company, education requires capital, production process, and production output as outcomes/graduates in higher education. However, in the world of education, there are extensive distinctions of quality definition. This is because educators and lecturers agree that graduates are not university products nor customers. Therefore, if determining and managing higher education quality is based on the customers’ satisfaction as the definition of quality in general, it will be difficult to determine who will be satisfied (Amir, 2016).



## **Strategies to Improve the Education Quality**

Based on the review in the previous chapters, it is discussed: (a) the required standards to create quality education by the government laws on education, (b) factors affecting education quality, (c) education problems in Indonesia, and (d) the quality of universities in Indonesia in the international world. It is stated that measuring education quality is not an easy task because it is different from measuring the quality of the company's products or services whose parameter is customers' satisfaction. To make the education quality observable and measurable clearly, we use international standards.

To be a world-class university, a university must be able to fulfill severe criteria as the evaluation standards. Furthermore, this university usually has distinctive characteristics from others. QS World University Rankings, for instance, has at least six evaluation parameters. The results of the Quacquarelli Symonds (QS) ranking often become the indicator for international students to select a target campus and country. There are several categories used as the evaluation of a world-class university. Therefore, strategies to improve the education quality at the university level is by optimizing the following aspects (Susanti, 2015): 1) Teaching; 2) Workability; 3) Internationalization; 4) Facilities; 5) Online distance learning; 6) Social responsibility; 7) Innovation; 8) Art and culture; 9) Inclusiveness; 10) Specialistic. An indicator that becomes a concern in the research aspect is the research quality as one of the academic activities on the campus. Some other indicators are productivity, citation by other researchers, and reward for the research.

## **Teaching**

The quality of higher education is closely related to professionalism. The presence of professional lecturers will affect the proper and correct Teaching and Learning Process, thus will definitely, and significantly affect the quality of education which is reflected in the uptake of graduates in the Business World and the Industrial World. Lecturer professionalism is someone who does quality teaching and educational work so that the set goals can be achieved optimally. Lecturer professionalism is based on Government Regulation (PP) Number 18 of 2007 concerning Lecturers, which states that one of the competencies a lecturer must have is professional competence. The professional competence referred to in this case is the ability of the lecturer to master the subject matter broadly and deeply (Sinambela, 2017).

To improve the quality of tertiary education, it must meet the standards set by the government. The Lecturer is a very important factor related to the quality of education. Lecturer and education staff standards are the minimum criteria regarding the qualifications and competencies of lecturers and education staff to organize education to fulfill graduate learning outcomes. Lecturers are required to have academic qualifications and competence of educators, be physically and mentally healthy, and have the ability to organize education in order to fulfill graduate learning outcomes. Academic qualification is the lowest level of education that must be fulfilled by a lecturer and is proven by a diploma. Educator competence is stated by teacher certificate, and/or professional certificate. The number of permanent lecturers in higher education is at least 75% (seventy-five percent) of the total number of

lecturers. The number of permanent lecturers who are assigned full time to carry out the learning process in each study program is at least 6 (six) people (Kemenristekdikti, 2014).

### **Workability**

Assessment is also carried out on academic strength, focus on academics and the ability of university graduates to work effectively in multicultural teams. The indicators generally used are surveys of workers and ranking of workers from as a university graduate. To create graduates who are absorbed in the world of work, several criteria are required, ie. Whether the graduates from this particular-study program are still widely needed by the world of work. Data from the Central Statistics Agency show that in 2018, diploma graduates were ranked second in the open unemployment rate with a percentage of 7.92. Besides, can be seen that university graduates who were included in the open unemployment rate in the last three years scored even higher than the maximum graduates from primary schools. This data reflects that diploma and undergraduate graduates in Indonesia do not necessarily find jobs. Judging from these facts, can be seen that diploma and undergraduate graduates who are expected to be able to reduce the unemployment rate in Indonesia, in fact, contribute to unemployment (BPS, 2019).

### **Internationalization**

This indicator assesses the proportion of foreign students and campus staff, the number of student exchanges who come to or leave from the university, and the number of foreigners representing each student. The assessment also includes the number and strength of the international partners of the campus. With this indicator, every university is required to establish cooperation with overseas universities to exchange knowledge and technology, as well as develop the potential of lecturers and students through exchange programs. It will be better if there are foreigners who study at universities in Indonesia. It indicates that the university has international quality. In early 2000 there a number of students from Malaysia who studied at the Faculty of Medicine, Diponegoro University (UNDIP) Semarang, but since 2006 the medical faculty of UNDIP Semarang has stopped accepting students from Malaysia (Kompas.com, 2009).

### **Facilities**

Through various campus facilities, students will be able to get various experiences from where they study. The facilities include complete sports facilities, modern information technology which is suitable for fulfilling the needs for helping teaching, and learning process, a library that provides complete literature both national and international, can be in the form of a manual as well as an internet network that can access reputable international journals. Health facilities are also essential to serve the health of lecturers and staff to stay healthy.

### **Online Learning (Distant Learning)**

There are at least 2 (two) main indicators of learning called quality, namely the process of learning and learning outcomes. Quality learning begins with making improvements to the learning process that leads to independent

learning for students, no longer learning that is centered on instructions from educators. The development of technology, information and communication that occurs very dynamically should be used to make improvements to the learning process. One example is implementing AVA (Audio Visual Aid) as a learning medium in the classroom. To create this process, what matters most is the readiness to organize a learning environment that is motivating, fun and exciting for students. This is what is often overlooked in the current management of education (Cholik, 2017).

In the current era of globalization, information and communication technology is developing very rapidly, and greatly influences the structure of human life. Influence on social, economic, cultural, political life, and also on the world of education. Especially in the world of education, it is demanded to always adjust to technological developments to improve the quality of education, from elementary classes to tertiary institutions. These adjustments are mainly adjustments to the use of information and communication technology in the implementation of the world of education in the learning process (Pramana, 2020).

The university will also be assessed based on student services and technology used, student interaction, student participation, and university commitment to conducting online learning. Learning by using information technology is a must and inevitable. Especially during the current pandemic, teaching and learning processes at all levels of education including higher education carry out distant learning. Every university, including the institutions, lecturers and students must be ready with information technology in the learning activities. Several universities already have a learning platform in the form of e-learning, e.g. Universitas Negeri Semarang has a learning platform called ELENA. Through ELENA, discussions can be held between lecturers and students, teaching materials can be displayed, assignments and students finish the assignments and answer quizzes through this application (UNNES, 2020).

### **Social Responsibility**

One of the points in the *Tridharma* of higher education is community service. This service is the social responsibility of a university. Each university has its roles in serving society following its potential. At UNDIP, one of the community services is in the form of the Community Service Program/*Kuliah Kerja Nyata* (KKN), in 1990 the writer participated in KKN activities up to three months, and this program applies to all students who have to meet the requirements to do KKN. Time flies and KKN activities may have changed. Social services to the surrounding community or in disaster areas are also the social responsibility of universities. For example, sending health personnel, both students of medicine faculty, or doctors according to the required specifications. Providing scholarships to students is also a form of social responsibility that can be done by universities (LPPM UNDIP, 2019).

### **Innovation**

This is the result of what has been achieved by the university. With this innovation, the university can create an economic, social, and even environment culture that will enhance the reputation. Creating innovations is certainly

not an easy task. It requires leadership from the local university with a good mission and vision for the future, also supported by complete infrastructure, highly dedicated lectures, and highly creative students. Innovations will be realized if the culture of research and literacy of scientific publications is optimally developed. A university, thus, will create discoveries in the academic field that can provide benefits for the community and the university.

### **Arts and Culture**

Another indicator for the assessment is the art and cultural performance, the number of cultural awards, and investment in culture.

### **Inclusivity**

Some important international documents that underlie inclusive education has have been agreed upon by many countries including Indonesia are the 1948 Universal Declaration of Human Rights, the 1989 United Nations Convention on the Children Rights, World Declaration on Education for All 1990 (UNESCO, 1990), the Standard Regulation on Equal Opportunities for Persons with Disabilities, 1993, Salamanca Statement and its Framework for Action on Special Needs Education 1994, World Education Forum Framework for Action 2000 (UNESCO, 2000), and others. In this scope, although the law is declared for children, the declaration somehow gives inspiration that universities also accommodate students with special needs to get an appropriate place to obtain an education at universities like any other normal student. Besides, gender equality and scholarships offered to students is the inclusiveness of the campus policy.

### **Specialist Criteria**

Assessment in this category is very narrow. A university will be assessed through various specializations it has, for instance, by considering the accreditation and disciplines of the study. Another essential thing to improve the quality of higher education to get attention from the international academic community is optimizing research activities and publications to reputable international journals (indexed in Scopus or Web of Science). Like it or not, journal publications should be encouraged to go further as many as possible so as not to be left behind by other countries. Even compared to neighboring countries such as Malaysia, Singapore and Thailand, Indonesia is still outnumbered despite the higher number of Indonesian universities, students, and lecturer. This matter is worrying and must be improved. To produce quality publications and research, roles from all parties are needed, including both the government and universities, in this case, the lecturers and students. Moreover, it requires contributions from the private sector to help to realize the expectations of sufficient research and publication. Because research and publication cost a quite amount of money, it will be very burdensome if it becomes the responsibility of the lecturers.

### **Conclusion**

Dealing with the fact that the ranking of universities in Indonesia is still left behind other countries in the world, Asia, and Southeast Asia, higher education in Indonesia must get attention and support to continuously improve

the quality from time to time according to the demands of the developing era. Quality education will produce quality human resources (HR), quality human resources will certainly be able to build the state and the nation of Indonesia to become better, and eventually improve the welfare of Indonesians. Quality education will make the nation and state of Indonesia have an equal position with other nations in the world so that Indonesia can show dignity and will be respected by the international community.

Creating quality education requires synergy and cooperation between government, society, and the private sector to support each other. Higher education in which there are lecturers, employees, and students must have a mission and vision that are in line with to determine the direction of education by utilizing maximum available resources optimally.

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## References

1. Ajpru, H., Wongwanich, S., & Khaikleng, P. (2014). Design of Educational Quality Assurance System for Driving Policy of Educational Reform in Thailand: Theory-based Evaluation. *Procedia - Social and Behavioral Sciences*, 116(22), 1416–1422.
  - a. <https://doi.org/10.1016/j.sbspro.2014.01.408>
2. Allam, Z. (2018). Students' Perception of Quality in Higher Education: An Empirical Investigation. *Management Science Letters*, 8(5), 437–444.
  - a. <https://doi.org/10.5267/j.msl.2018.4.002>
3. Amir, M.F. (2016). *Manajemen Kinerja Perguruan Tinggi*. Jakarta: Mitra Wacana Media.
4. APO. (2020). Public Policy Innovation for Human Capital Development. *Asian Productivity Organization*, 1–178.
  - a. <https://www.apo-tokyo.org/publications/wp-content/uploads/sites/5/Public-Policy-Innovation-for-Human-Capital-Development-1.pdf>
5. Argina, A. W., Mitra, D., Ijabah, N., & Setiawan, R. (2017). Indonesia PISA Result: What Factors and What Should be Fixed? *The 1st Educational and Language International Conference Proceedings Center for International Development of Unissula*, 69–79. Retrieved from <http://jurnal.unissula.ac.id/index.php/ELIC>
6. Bazargan, A. (1999). Introduction to Assessing Quality in Higher Medical Education in Iran: Challenges and Perspectives. *Quality in Higher Education*, 5(1), 61–67.
  - a. <https://doi.org/10.1080/1353832990050106>

7. Bazargan, A. (2009). From Internal Evaluation in Medical Education to National Agency for Quality Assurance in Iran Higher Education: Challenges and Perspectives. *Journal of Medical Education Development Center*, 6(1), 81–88.
  - a. [http://sdme.kmu.ac.ir/article\\_90162\\_6383eb1db620c5a3b64d5784ad858c67.pdf](http://sdme.kmu.ac.ir/article_90162_6383eb1db620c5a3b64d5784ad858c67.pdf)
8. BPS. (2019). *Official News Statistics*.
9. Chalaris, M., Gritzalis, S., Maragoudakis, M., Sgouropoulou, C., & Tsolakidis, A. (2014). Improving Quality of Educational Processes Providing New Knowledge Using Data Mining Techniques. *Procedia - Social and Behavioral Sciences*, 147, 390–397. <https://doi.org/10.1016/j.sbspro.2014.07.117>
10. Chamisah. (2017). TIMSS and PISA-How They Help The Improvement of Education Assessment in Indonesia. *Conference Proceedings ARICIS I*, 42–56.
  - a. <https://www.oecd-ilibrary.org/docserver/9789264010543-2-en.pdf?expires=1612204423&id=id&accname=guest&checksum=8D12A23954319E0D6CA085AE29D7C1DF>
11. Cholik, C. A. (2017). Utilization of Information and Communication Technology to Improve Indonesian Education. *Syntax Literate: Jurnal Ilmiah Indonesia*, 2(6), 21–30.
  - a. <http://repositorio.unan.edu.ni/2986/1/5624.pdf%0Ahttp://fiskal.kemenkeu.go.id/ejournal%0Ahttp://dx.doi.org/10.1016/j.cirp.2016.06.001%0Ahttp://dx.doi.org/10.1016/j.powtec.2016.12.055%0Ahttps://doi.org/10.1016/j.ijfatigue.2019.02.006%0Ahttps://doi.org/10.1>
12. CWCU. (2019). Academic Ranking of World Universities. *Shanghai Ranking*.
  - a. <http://www.shanghairanking.com/index.html>
13. Damirchili, F., & Tajari, M. (2011). Explaining Internal Factors Effective on Educational Quality Improvement Based on Views of Students from Zanzan Azad Universities. *Procedia - Social and Behavioral Sciences*, 30, 363–366.
  - a. <https://doi.org/10.1016/j.sbspro.2011.10.071>
14. Deming, W.E., & Edwards, D.W. (1982). *Quality, Productivity, and Competitive Position* (Vol. 183). Massachusetts Institute of Technology, Center for advanced engineering study.
  - a. [https://scholar.google.com/scholar\\_lookup?title=Quality%2C+productivity%2C+and+competitive+position&author=W.E.](https://scholar.google.com/scholar_lookup?title=Quality%2C+productivity%2C+and+competitive+position&author=W.E.)
  - b. [Deming&publication\\_year=1982#d=gs\\_cit&u=%2Fscholar%3Fq%3Dinfo%3AgCFT5m80Qe8J%3Ascholar.google.com%2F%26output%3Dcite%26scirp%3D0%26hl%3Did](https://scholar.google.com/scholar_lookup?title=Quality%2C+productivity%2C+and+competitive+position&author=W.E.&publication_year=1982#d=gs_cit&u=%2Fscholar%3Fq%3Dinfo%3AgCFT5m80Qe8J%3Ascholar.google.com%2F%26output%3Dcite%26scirp%3D0%26hl%3Did)
15. Díez, F., Villa, A., López, A. L., & Iraurgi, I. (2020). Impact of Quality Management Systems in The Performance of Educational Centers: Educational Policies and Management Processes. *Heliyon*, 6(4). <https://doi.org/10.1016/j.heliyon.2020.e03824>
16. Faisal, & Martin, S. N. (2019). Science Education in Indonesia: Past, Present, and Future. *Asia-Pacific Science Education*, 5(1). <https://doi.org/10.1186/s41029-019-0032-0>
17. Goetsch, D. L., Helba, S., & Davis, S. (1994). *Introduction to Total Quality: Quality, Productivity, Competitiveness*. New York: Macmillan College.
18. Government of Republic of Indonesia. (2003). *Act of the Republic of Indonesia on National Education System*, 1–57.
19. Hadis, A., & Nurhayati, B. (2012). *Education Quality Management*. Alfabeta.

20. Hampton, G. M. (1993). Gap Analysis of College Student Satisfaction as a Measure of Professional Service Quality. *Journal of Professional Services Marketing*, 9(1), 115–128. [https://doi.org/10.1300/J090v09n01\\_10](https://doi.org/10.1300/J090v09n01_10)
21. Hewi, L., & Shaleh, M. (2020). Refleksi Hasil PISA: Upaya Perbaikan Bertumpu Pada Pendidikan Anak Usia Dini. *Jurnal Golden Age*, 4(01), 30–41.
  - a. <https://doi.org/10.29408/jga.v4i01.2018>
22. Hill, H., & Wie, T. K. (2013). Indonesian Universities: Rapid Growth, Major Challenges. In D. Suryadarma & G. W. Jones (Eds.), *Education in Indonesia* (pp. 160–179). ISEAS–Yusof Ishak Institute. <https://doi.org/DOI: undefined>
23. Hutasuhut, R. (2019). *Notes on Education Sector Problems 2019*.
  - a. <https://www.kompasiana.com/ronaldhutasuhut/5c6dc0efaebe117b400aa42/catat-an-permasalahan-sektor-pendidikan-2019#>
24. Jahari, J. (2020). Preparing Teachers in The Era of “Independence Learning” in Indonesia. *International Journal of Psychosocial Rehabilitation*, 24(7), 3990–3998.
  - a. <https://www.psychosocial.com/article/PR270395/15682/>
25. Joseph, R. M. (1998). Intention and Knowledge in Preschoolers’ Conception of Pretend. *Child Development*, 69(4), 966–980. <https://doi.org/10.1111/j.1467-8624.1998.tb06154.x>
26. Juran, J. M. (1993). Made in U.S.A.: A Renaissance in Quality. *Harvard Business Review*, 71(4), 42–47,50. <http://europemc.org/abstract/MED/10127039>
27. Kemendikbud. (2020). ASEAN Qualifications Reference Framework Referencing Report of Indonesia.
  - a. [https://asean.org/storage/2017/03/INDONESIA\\_Referencing\\_Report\\_-FinalEndorsed-JUNE\\_2020.pdf](https://asean.org/storage/2017/03/INDONESIA_Referencing_Report_-FinalEndorsed-JUNE_2020.pdf)
28. Kemenristekdikti. (2014). Standar Nasional Pendidikan Tinggi (SN Dikti). *Produk Hukum*, 1–109.
  - a. [http://www.kopertis12.or.id/wp-content/uploads/2014/06/permen\\_tahun2014\\_nomor049.pdf](http://www.kopertis12.or.id/wp-content/uploads/2014/06/permen_tahun2014_nomor049.pdf)
29. Kompas.com. (2009). *Undip Rejects Malaysian Students Since 2006*.
30. Kurniawan, M. I. (2018). Pancasila as a Basis for Nation’s Character Education, *I25 (Icigr 2017)*, 268–270. <https://doi.org/10.2991/icigr-17.2018.64>
31. LPPM UNDIP. (2019). *Buku Panduan Kuliah Kerja Nyata Universitas Diponegoro (KKN UNDIP) Tim I Tahun Akademik 2019/2020*.
  - a. <https://fdokumen.com/download/lembaga-penelitian-dan-pengabdian-kepada-lppmundipacidv1wp-content/uploads/buku-panduan-kkn-tim-i-2020pdf>
32. OECD. (2005). *The Programme for International Student Assessment: An Overview*. <https://www.oecd-ilibrary.org/docserver/9789264010543-2-en.pdf?expires=1612204423&id=id&accname=guest&checksum=8D12A23954319E0D6CA085AE29D7C1DF>
33. OECD. (2010). Learning Our Lesson: Review of Quality Teaching in Higher Education. *Institutional Management in Higher Education*.
  - a. <https://www.oecd.org/education/imhe/44058352.pdf>
34. OECD. (2011). *Southeast Asian Outlook 2011/12*. <https://www.oecd.org/dev/49427029.pdf>

35. OECD. (2013). *PISA 2012 Assessment and Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy*. OECD Publishing.
  - a. [https://www.oecd.org/pisa/pisaproducts/PISA 2012 framework e-book\\_final.pdf](https://www.oecd.org/pisa/pisaproducts/PISA%2012%20framework%20e-book_final.pdf)
36. OECD. (2017). *PISA for Development Assessment and Analytical Framework: Reading, Mathematics and Science, Preliminary Version*. OECD Publishing.
  - a. [https://www.oecd-ilibrary.org/education/pisa-for-development-assessment-and-analytical-framework\\_9789264305274-en](https://www.oecd-ilibrary.org/education/pisa-for-development-assessment-and-analytical-framework_9789264305274-en)
37. OECD. (2019a). Programme for International Student Assessment (PISA) Result from PISA 2018. *OECD, I-III*, 1–10. [http://www.oecd.org/pisa/ Data](http://www.oecd.org/pisa/Data)
38. OECD. (2019b). What is PISA? *PISA 2018 Assessment and Analytical Framework*, 1–10.
39. OECD, & ADB. (2015). *Education in Indonesia: Rising to the Challenge*. *Far Eastern Survey* (Vol. 20).
  - a. <http://www.adb.org/sites/default/files/publication/156821/education-indonesia-rising-challenge.pdf>
40. Pramana, C. (2020). *Professional Management of Educators & Education Personnel*. (GCAINDO, Ed.) (Edisi I). Yogyakarta: Mirra Buana Media.
41. Psychogios, A. G., & Priporas, C.-V. (2007). Understanding Total Quality Management in Context: Qualitative Research on Managers Awareness of TQM Aspects in The Greek Service Industry. *The Qualitative Report*, 12(1), 40–66.
  - a. <http://www.nova.edu/ssss/QR/QR12-1/index.html>
42. QSWUR. (2018). *QS World University Rankings by Subject*.
  - a. <https://www.topuniversities.com/subject-rankings/2018>
43. QSWUR. (2020). *University Rankings*. <https://www.topuniversities.com/university-rankings>
44. Rankings, Q. W. U. (2020). *QS Asia University Rankings 2020*.
45. Rifa'i, A. A., Permana, J., Komariah, A., & Sudarsyah, A. (2019). The Influence of Internal Quality Assurance and Quality Culture on Performance of Higher Education Institution. *Advances in Social Science, Education and Humanities Research (ASSEHR)*. *2nd International Conference on Research of Educational Administration and Management (ICREAM 2018)*, 258, 274–278. <https://doi.org/10.2991/icream-18.2019.56>
46. Rosser, A. (2018). Beyond Access: Making Indonesia's Education System Work. *Lowy Institute*, 2–29. <https://think-asia.org/handle/11540/8034>
47. Rustiadi, S. (2015). Creating Better Education System, Building Stronger Human Capital: A Creative Industries Perspective. *Procedia - Social and Behavioral Sciences*, 169(August 2014), 378–386. <https://doi.org/10.1016/j.sbspro.2015.01.323>
48. Salikha, A. (2019). (Ranked) Top 15 Southeast Asian Universities In QS World University Rankings 2020.
  - a. <https://seasia.co/2019/06/27/ranked-top-15-southeast-asian-universities-in-qs-world-university-rankings-2020>
49. Shils, E. (2008). *The Calling of Education: "The Academic Ethic" and Other Essays on Higher Education*. University of Chicago Press.



- a. [https://scholar.google.com/scholar\\_lookup?title=The calling of education%3A The academic ethic and other essays on higher education&publication\\_year=1997&author =Shills%2CE](https://scholar.google.com/scholar_lookup?title=The+calling+of+education%3A+The+academic+ethic+and+other+essays+on+higher+education&publication_year=1997&author=Shills%2CE).
50. Sinambela, L. P. (2017). Lecturer Professionalism And Higher Education Quality. *Jurnal Populis*, 2(4), 579–596.
51. SJR. (2021). *Schimago Journal & Country Rank*. <https://www.scimagojr.com/countryrank.php>
52. SNP. (2015). Peraturan Pemerintah Republik Indonesia Nomor 13 Tahun 2015 Tentang Perubahan Kedua Atas Peraturan Pemerintah Nomor 19 Tahun 2005 Tentang Standar Nasional Pendidikan, 1–23.
  - a. <http://luk.staff.ugm.ac.id/atur/PP13-2015PerubahanKeduaSNP.pdf>
53. Sudarwati. (2017). Indonesia Education Statistics in Brief. (Sudarwati, Ed.), *Ministry of Education and Culture Secretariat General of Jakarta Education and Culture Data and Statistics Center*, p. 8.
54. Suryadarma, D., & Jones, G. W. (2013). *Education in Indonesia*. ISEAS Publishing. Singapore. Retrieved from <https://bookshop.iseas.edu.sg/account/downloads/get/16516>
55. Susanti, A. (2015). This is a requirement to be a world class campus.
  - a. <https://news.okezone.com/read/2016/06/15/65/1415729/ini-syarat-jadi-kampus-kelas-dunia>
56. UNDP. (2019). *Human Development Report 2019: Beyond Income, Beyond Averages, Beyond Today*. United Nations Development Programme.
  - a. <http://hdr.undp.org/sites/default/files/hdr2019.pdf>
57. UNESCO. (1990). World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs.
58. <https://fdokumen.com/download/lembaga-penelitian-dan-pengabdian-kepada-lppmundipacidv1wp-content/uploads/buku-panduan-kkn-tim-i-2020pdf>
59. UNESCO. (1998). *Higher Education in the Twenty-first Century Vision and Action, I*, 1–138. <http://unesdoc.unesco.org/images/0011/001163/116345s.pdf>
60. UNESCO. (2000). *Final Report*. <https://unesdoc.unesco.org/ark:/48223/pf0000121117>
61. UNNES. (2020). Information About UNNES Online Learning.
  - a. <https://unnes.ac.id/pengumuman/info-seputar-pembelajaran-daring-unnes>
62. Vykydal, D., Folta, M., & Nenadál, J. (2020). A Study of Quality Assessment in Higher Education within The Context of Sustainable Development: A Case Study from Czech Republic. *Sustainability (Switzerland)*, 12(11), 1–22.
  - a. <https://doi.org/10.3390/su12114769>
63. Wagner, H., Hahn, I., Schöps, K., Ihme, J. M., & Köller, O. (2018). Are The Tests Scores of The Programme for International Student Assessment (PISA) and The National Educational Panel Study (NEPS) Science Tests Comparable? An Assessment of Test Equivalence in German Schools. *Studies in Educational Evaluation*, 59(October), 278–287. <https://doi.org/10.1016/j.stueduc.2018.09.002>
64. Weber, P. L. E. (2003). Justification and Methods of University Evaluation: a European Perspective. <https://www.rieti.go.jp/en/events/03022201/paper/weber.pdf>
65. Welch, A. R. (2007). Blurred Vision?: Public and Private Higher Education in Indonesia. *Higher Education*, 54(5), 665–687. <https://doi.org/10.1007/s10734-006-9017-5>
66. Yadav, S. K., & Pal, S. (2012). Data Mining Application in Enrollment Management: A Case Study. *International Journal of Computer Applications*, 41(5), 1–6. <https://doi.org/10.5120/5534-7581>

67. Yarmohammadian, M. (2004). Quality in Higher Education. Encyclopedia of Higher Education. Tehran: Ministry of Science. *Research, and Technology Publication*.
68. Yarmohammadian, M. H., Mozaffary, M., & Esfahani, S. S. (2011). Evaluation of Quality of Education in Higher Education Based on Academic Quality Improvement Program (AQIP) Model. *Procedia - Social and Behavioral Sciences*, 15, 2917–2922. <https://doi.org/10.1016/j.sbspro.2011.04.214>