

Challenges and Structural Ambidexterity on Improving the Quality of Lecturers in Higher Educations in Indonesia: Literature Review

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Abstract — *A systematic literature review aims to determine the challenges and structural ambidexterity in improving the quality of lecturers at Indonesian universities. Articles were selected through a screening process in 2014-2021. Reviews were conducted on an online database, Google Scholar. There were seven articles reviewed based on the lecturer's quality criteria. Based on the analysis of the article, there are nine challenges to improve the quality of lecturers in universities and structural ambidexterity to improve the quality of university lecturers in Indonesia.*

Keywords — *challenges, structural ambidexterity*

I. INTRODUCTION

Based on the world university ranking agency: Quacquarelli Symonds (QS) World University Rankings (WUR) in 2021, the highest university in Indonesia is Universitas Gadjah Mada, which is at 254th in the world and 57th in Asia, followed by Universitas Indonesia, which is in the order of 305 in the world and 59 in Asia. There are six main aspects that are assessed in the QS World University Rankings, namely a) Academic reputation, b) Employer reputation, c) Citation per Faculty, d) Faculty Student Ratio, e) International Faculty, f) International Students.

The Scimago Institutions Rankings (SIR) also issued the results of ranking the best universities in various countries, including Indonesia in 2021. The assessment indicators used to determine the quality of a university consist of 3 main aspects of assessment: research, innovation, and social impact, all of which are taken from information provided on the website of each university, with different weights in the overall assessment process, where research holds the highest percentage of 50 percent, the rest is innovation (30 percent) and social impact (20 percent). If based on the assessment of these three aspects, the Scimago Institutions Rankings mentions the University of Indonesia (UI) as the best university in Indonesia or ranked 651st globally.

In addition to rankings made by foreign institutions, the Government of Indonesia in this case by the Directorate General of Higher Education (Dikti) also ranks universities in Indonesia based on the following criteria: input (20%), process (25%), output (25%), outcomes (30%). The results of the 2020 clustering, Institut Pertanian Bogor in first place with a total value of 3,648.

From the rankings mentioned above, it can be seen that the quality of Indonesian universities is still low. And one of the factors that affect the quality of the college is the quality of lecturers. In Indonesia, the lecturer quality development program has also been known since the 70s. Several universities have organized activities that fall into the category of lecturer development, such as special upgrading for all new lecturers. Some universities have even established teaching staff training centers and organize lecturer development activities at regional and national levels (Yusufhadi, 2010).

The government has also tried to develop the competence of lecturers. One of them is by providing an educator certification program (Serdos) as formal evidence of recognition of lecturers as professionals at the higher education level. The objectives include assessing the professionalism of lecturers, protecting the teaching profession, improving educational processes and outcomes, increasing awareness of lecturer responsibilities, and accelerating the achievement of national education goals. Another Government effort is to provide postgraduate scholarships as stipulated in pasal 46 ayat 2 UU Nomor 14 tahun 2005 tentang Guru dan Dosen, lecturers must have minimum academic qualifications of graduates from master's programs for diploma programs and undergraduate programs, and graduates from doctoral programs for postgraduate programs. Ironically, although various efforts have been made by the government in order to improve the quality of higher education, these reform efforts do not seem to be comprehensive. Professor Andrew Rosser from the University of Melbourne who does a lot of his research in Indonesia said that although many universities encourage lecturers to conduct research and write journals on an international scale, the quality is dubious.

Based on empirical studies and data in the field regarding the condition of the quality of university lecturers in Indonesia, the literature review related to the challenges and strategies for improving the quality of lecturers in universities is interesting to study. This journal will analyze the challenges and strategies that can be applied to optimize the improvement of the quality of lecturers at universities in Indonesia.

II. METHOD

The design of this study used the literature review method with a systematic search on the Google Scholar database. The researcher conducted a search by reviewing general terms and specific terms. The search terms used are as follows: quality of lecturers, universities, quality of Indonesian universities.

There are seven journals that pass the criteria for literature review. The criteria for the journals analyzed are 1. Research on the quality of lecturers in universities, 2. Research subjects focus on universities in Indonesia, 3. Research published in 2014-2021. Article identification is done by checking the suitability of the abstract with the purpose of literature review. Then the full text of the article is identified by digging up relevant information according to the purpose of a systematic review research.

The selection of literature is also through the process of selecting research settings, based on the criteria and the entire process described previously. This study selected 7 literatures for review. This study resulted in a discussion of the challenges and strategies for improving the quality of university lecturers in Indonesia.

III. RESULT AND DISCUSSION

Challenges of Improving the Quality of Lecturers in Higher Education

From the seven reviewed journals, several challenges were found in improving the quality of lecturers in higher education, including a) the qualifications of existing lecturers are still relatively low, b) the ability of lecturers in the field of technology, c) Shifting competency needs of college graduates d) Lack of lecturer motivation. A summary of the challenges of improving the quality of lecturers in higher education from the seven journals is in Table 1.

a) The qualifications of existing lecturers are still relatively low

The number of active lecturers in Indonesia based on PDDIKTI data on June 29, 2021, D-4 graduates are 2,313 (0.78%), S-1 are 30,612 (10.39%), S-2 are 207,586 (70.44%), S-3 as many as 42,825 (14.53%), Sp-1 as many as 3,093 (1.05%), professions as many as 2,431 (0.82%), without level as many as 5,844 (1.98%) with a total of 294,704. From these data, it can be seen that the qualifications of lecturers in Indonesia are still low.

Indonesia's capacity for science and technology adoption and innovation creation is still low. Indonesia is ranked 85 out of 129 countries with a Global Innovation Index (GII) score of 29.72 on a scale of 0-100 (2019). This is due to the low R&D spending on GDP, the number of patents, as well as science and engineering publications at the global level. In addition, R&D infrastructure is still limited. The number of science and technology human resources is still limited and only 14.08 percent of them have doctoral qualifications. The innovation ecosystem has not yet been fully created so that the downstream process and commercialization of R&D results are hampered. Triple helix collaboration has not been supported by adequate university capacity as a source of technological innovation (center of excellence) (Laporan Kinerja Kementerian Riset dan Teknologi/Badan Riset dan Inovasi Nasional (Kemenristek/BRIN) Tahun 2020).

b) Lecturer's Ability in Technology

Another challenge faced by lecturers in the era of the Industrial Revolution 4.0, Society 5.0, and the Covid-19 pandemic is to improve their capabilities in the field of technology. However, technology still cannot replace the role of lecturers and learning interactions between students and lecturers because education is not only about acquiring knowledge but also about values, cooperation, and competence. This pandemic situation is a challenge for the creativity of every lecturer in using technology to develop the world of education.

c) Shifting competency needs for college graduates

The phenomenon of shifting competency needs of college graduates in meeting the current world of work, needs attention for lecturers at universities. Do all university students need to be equipped with ICT competencies such as digital economy and digital entrepreneurship through a structured curriculum or through trainings or public lectures so that university graduates can be more adaptive to changes in the labor market and the world of work. This, in my opinion, is another challenge in the year to come.

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No	Research Title	Author, year	Research Method	Result	
				Challenges	Strategy
1	Peningkatan Mutu Dosen PTS di Kabupaten Jombang	Rifa Nurmilah, 2018	Descriptive research with a naturalistic qualitative approach in Jombang Regency	UNIPDU has 19 lecturers and UNHASY has 15 lecturers who are still undergraduate. Improving the quality of research and service is only sending to participate in proposal clinics, holding training, workshops, seminars on the campus itself by bringing in speakers from Public universities.	Sending lecturers for further studies: UNIPDU (19 dosen S1) and UNHASY (11 dosen)
2	Manajemen Mutu Dosen	Susanto AS, Husainie Usman, Hasbi Sjamsir, 2020	Qualitative approach with the type of case study at Stikes Muhammadiyah Samarinda	The quality of lecturers in the fields of teaching, research, service and Al-Islam is still not fulfilled	quality management of lecturers: (1) the field of learning is met if it is in accordance with the standards of planning, implementation, and supervision; (2) the field of research is determined by eight standards; (3) the field of Community Service is determined by eight standards; (4) the field of Al-Islam and Kemuhammadiyah is determined by the practice of the Qur'an, Hadith, and Ra'yu; (5) The new concept of lecturer quality management has nine steps.
3	Manajemen Pengembangan Dosen Sebagai Upaya Meningkatkan Mutu Sekolah Tinggi Pariwisata AMPTA Yogyakarta.	Siti Rokhmi Lestari, 2014	qualitative approach with data collection techniques that include observation, interviews, and documentation.	limited funds, lack of motivation from lecturers towards the achievement of the academic process	Improvement of academic positions, facilitating further study of Masters and Doctoral Degrees, Facilitating seminars, discussions, symposiums, workshops on curriculum, education and teaching as well as on scientific research.
4	Peningkatan Mutu Dosen Dalam Proses Pembelajaran di Universitas	Ilham Fahmi, Mohammad Fakry Gaffar, Johar Permana, Endang Harawan, 2020	qualitative research methods, the research was conducted at the Singaperbangsa Karawang University.	Singaperbangsa University has 374 lecturers with S2 qualifications and 86 lecturers with S3 qualifications, out of 374 S2 lecturers, 81 lecturers are currently studying further. There are 41 lecturers who still do not have academic positions. Of the 460 lecturers there are 144 lecturers who already have an educator certificate.	Providing scholarships, implementing lecturer competency development programs, namely PEKERTI program, Applied Approach (AA) program, lecturer internship program, Leasson Study.

5	Peningkatan Kompetensi Dosen dalam Cara Mengajar Melalui Pengembangan Training Need Analysis (Studi Kasus di Prodi Manajemen Fakultas Ekonomi Universitas Pamulang	Derita Qurbani, 2017	The research was conducted using a combination model or concurrent embedded design method (unbalanced mixture) which combines qualitative methods as primary methods and quantitative methods into secondary methods at Pamulang University.	UNPAM lecturers only 8% have high pedagogic competence, 14% have high professional competence, 60% have high personality competence, and 38% have high social competence. a. There are students who have started to compare the quality of teaching from graduate lecturers from outside UNPAM which is better than UNPAM. b. There are still many lecturers who often come late to class. c. There are lecturers who are GAPTEK (technological stuttering) d. Lecturers are less creative towards interesting teaching and learning process methods. e. Lecturer knowledge of the material provided is still minimal. f. There are no learning modules provided by lecturers to students. g. Lack of intention or motivation to learn students, to become graduates who quality in theory and practice.	The university will enroll lecturers in the following training: a. Instructional technique basic skills training b. Applied Approach Training c. Basic level multimedia training d. Excellent service training e. Character education training for students.
6	Kebijakan Peningkatan Mutu Dosen	Kusnan, 2017	Literatur review	The process of developing and fostering the ability of lecturers in carrying out their duties so far does not seem to have reached the expected conditions	Intensive and comprehensive studies and research are needed with various relevant approaches.
7	Manajemen Peningkatan Kualitas Dosen (Studi Kasus pada Fakultas Tarbiyah UIN Malang)	S. Nor Hasanah Yasir, 2018	qualitative method with case study approach is naturalistic inquiry. Research at the Tarbiyah Faculty of UIN Malang	teaching lecturers are only limited to teaching and lack of attention to students. Inadequate research capabilities of lecturers and limited funds dana	give priority to activities to improve the quality of lecturers at the Faculty of Tarbiyah UIN Malang, foster the values of sincerity, trust that has been given by the government and society, maintain and improve a quality work ethic.

d) Lack of lecturer motivation

In terms of research productivity, the number of lecturer publications in international journals has increased, but the quality still needs to be improved. The number of international publications that can be cited in 2018 only reached 31,708 (ranked 22 out of 233 countries).

Although the number of patents granted (granted) continues to increase and reaches 991 patents in 2019, the number of patent registration applications from Indonesian citizens is still low and fluctuates every year. To encourage economic productivity through technological innovation, it is necessary to build an innovation ecosystem that is supported by the government (Laporan Kinerja Kementerian Riset dan Teknologi/Badan Riset dan Inovasi Nasional (Kemendiknas/BRIN) Tahun 2020).

Currently, there are serious problems in the process of downstreaming research and innovation results from universities. In fact, there are indeed a lot of research results from universities in the form of patents or prototypes of a product that is stalled and dragging to be marketed. In fact, initially, the research received very significant funding from donors. One of the reasons is that related parties, including the government, prefer ready-made products from imported products. Meanwhile, related researchers are left to compete for sponsors to promote their research results.

According to Pryces & Jones (2010), happiness in the workplace is an individual who has positive feelings at all times, because individuals who know, manage and influence the world of work so as to maximize performance and provide satisfaction at work. The question now is whether lecturers at universities have enjoyed the atmosphere of joy in carrying out their duties in the Tridarma of Higher Education. If not all of these lecturers can enjoy their daily work, then their productivity is still not optimal and can still be improved through this independent lecturer route.

In fact, like it or not, currently, all lecturers in higher education must carry out the PT Tridarma which includes Teaching, Research and Community Service (Community Service). The Ministry of Education and Culture hopes that lecturers throughout Indonesia will become super humans who can perform these three tasks perfectly. Routinely, lecturers are evaluated using a standard measure that has been outlined by the Higher Education which includes the achievement of the three tasks.

Strategies for improving the quality of lecturers in universities

Every university is faced with two major challenges today, namely: 1) managing optimal performance at this time, and 2) adapting to various changes that occur today and will affect the continuity of higher education in the future. Universities are still mostly concerned with 'current' issues, regarding the alignment and utilization of existing resources and competencies to achieve higher education goals. However, universities are required to innovate to survive, so future fluency is needed. For this reason, universities are asked to have a different mindset, skillset and toolset from what is commonly applied so far.

In order to survive, universities need to learn to be ambidextrous: able to exploit all the potentials and resources of the 'present' while simultaneously exploring and adapting to the changing conditions of the 'future'. The term organizational ambidexterity introduced by Prof. Robert Duncan is becoming very relevant and vital today. Universities that are only capable of exploitation and are oriented towards short-term success must begin to learn to explore equally well. Exploitation of current resources and capacities is necessary to increase competitiveness in today's market, whereas exploration prepares to face future needs (Asif and De Vries, 2015).

Structural Ambidexterity

Structural ambidextrous companies separate exploratory and exploitative, each with a different management, process, structure, and culture, but are well integrated under the top management team (O'Reilly & Tushman, 2004).

To become an ambidextrous university, exploitation lecturers who focus on efficiency are structurally separate from exploration lecturers who focus on innovation. This can be managed by creating an organizational environment that enables, supports, and elasticates lecturers to swing between efficiency and innovation-focused activities. The unification of these two groups must always be carried out to obtain complementary competencies. The following can be used as a normative guideline by universities that build ambidextrous organizations (O'Reilly & Tushman, 2004).

1. Having a leadership team (Rektorat) with an ambidextrous orientation

The Leadership Team (LT) is responsible for determining the goals, actions, main choices, and allocation of higher education resources. There should be a shared reward for efficiency and innovation among team members. It's also important to have mutual trust and respect for one another for opposing mindsets to listen to one another.

2. Divergent-convergent decision-making process

Depending on background and orientation, LT members are responsible for roles focused on innovation and/or efficiency, or both. Establishing clear roles increases the likelihood of conflicts that will always be raised and discussed in LT discussions. Divergent decision making will be oriented towards both efficiency and innovation, and convergent decision making will be oriented towards one of them, or a combination of both. Through this process, even when one is given higher priority, the other is not, this should not be for long. Also, through learning and exposure to other views, one category of people can gain the ability to become another. Such a discussion process also provides LT members with the logic to evaluate project ideas from the ground up.

3. *Have innovation and efficiency in all units*

Both innovation and efficiency must be carried out by every university unit. The pool of innovation and efficiency champions in LT results in the recruitment of innovation and efficiency candidates at the middle management level and then for the lower levels in the hierarchy. This results in the existence of a mindset for innovation (risk orientation and the ability to do things beyond the obvious), and a mindset for efficiency at multiple levels, and across the organization. The supporting organizational environment leads to motivating these champions to stretch themselves in whatever roles and hierarchies they are in and, thus, leads to increased innovation and more efficient operation of the company's existing business activities.

4. *Adopt a portfolio approach*

The conflict between a focus on innovation and efficiency can also be addressed by adopting a portfolio approach. This means that on the one hand, the focus may be on teaching dharma. On the other hand, there must be a focus on a series of innovation activities, namely the dharma of research and service. This series of activities can gradually shift from a teaching focus to a research focus (or vice versa). Through such a mechanism, at any given point in time, the overall portfolio of the organization remains in balance. Efforts to balance the portfolio can also be managed by asset (or organizational) acquisitions with complementary focuses.

5. *Organizational Ambidexterity and Organizational Performance*

Balanced attention to teaching, research and dedication leads to superior performance because existing ones are well served and innovation creates a platform for excellence and long-term resilience. The above-mentioned mechanism enhances the two activities orthogonally.

IV. CLOSING

Conclusion

Based on a systematic review of 7 journals used in this study, it can be concluded that the challenge of improving the quality of lecturers can be overcome by a structural ambidexterity strategy where lecturers can be divided into lecturers who focus on teaching and lecturers who focus on research and service.

Suggestion

Research on the application of ambiguity in universities in Indonesia has not been widely published in international and national databases. It is recommended for further researchers to examine the application of ambidexterity in universities.

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