CAPACITY DEVELOPMENT STRATEGY OF ACADEMIC STAFF (STRATEGI PENGEMBANGAN KAPASITAS TENAGA PENDIDIK, PKTA) TO INCREASE PRODUCTIVITY AND COMPETITIVENESS OF HIGHER EDUCATION

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ABSTRACT

In 2020, at the last stage, this study had some research findings related to output and outcome derived from implemented capacity development policy of the academic staff in order to approach the productivity and competitiveness of Higher Education. The method used in this research was "Mixed Method" (Creswell & Clark, 2007) which involved explanatory design and meta-analysis of case study in 11 state universities with legal entity (Perguruan Tinggi Negeri berbadan hukum, PTNbh). The conceptual framework of this study consists of 3 related main points, as follows: globalization, management of change, and determining factors of world class higher education. Based on research findings, generally Higher Education still required 1) graduate standard was determined by some aspects consisting of graduation timeliness and hiring period, relevant implementation and income, numbers of published international scientific research, citation of lecturer scientific publication; 2) standardized service offered by the university which fulfilled students' requirements with additional value added to obtain economic benefit, social and character; 3) commitment between lecturer and high education leader as an effort to achieve internationalized goals implemented in the general strategic plan; 4) networking development in a prospective of internationalized higher education. As an implication, there were so many ways to respond to megatrend which affects on change of development strategy of Higher Education, policy, leadership, and management. The change in cultural, approach, and orientation demand a person to understand the aim, benefit, and outcome. Nevertheless, the change focus was lied on the awareness of Higher Education leaders to make the changes (Conscious transformational change leadership).

1. INTRODUCTION

University in Indonesia takes an important role in human resource development. It is believed that after a hundred of years, Indonesia has competitive human resources. The main reason of conducting this study is that based on fact, many state universities with legal entity (Perguruan Tinggi Negeri berbadan hukum, PTNbh) are still left behind from international college standards. Higher Education must contribute in formulating the best output in national's progress to human resource development. This is the reason why this study focuses on transformation strategy formerly generated from bureaucratic culture switched to corporate culture. Indonesia's Higher Education

has not achieved the target to be at the top 500 world class rank. While, at the Asian level, the position is still above 100. Gajah Mada University (UGM) and Bandung Institute of Technology (ITB), high grade university in Indonesia, are at the moment still not capable of competing with other universities from Singapore, Japan, and China. Higher Education in Indonesia needs to do further study on weaknesses, strengths, as well as acceleration strategies to put PTNbh to be at the same level as other world class higher educations. This study adopts a research approach comprising of prospective policy evaluation and comparative study between UGM and Indonesia University (UPI), as samples of state university as PTNbh. Based on findings, there are some strategies that have to be applied to achieve World Class University (WCU). These are as follows: 1) increasing the distinguished academic standard, 2) building infrastructures, 3) sufficient funding, 4) government support to change Indonesia universities to be more modern and internationally well-known.

Concerning the target of ministry of research and technology and Higher Education to promote the university in Indonesia to the top of 500 ranks in the world, indeed full support from the government, college, and the people is needed. At this moment, there are only three (3) universities in Indonesia which have already been in world rank. These are UI, UGM, and ITB which scores are 292, 359, and 391. Strategies applied by ministry of research and technology are budgeting policy, research and innovation policy, both quantity and quality enhancement of doctoral degrees and professors. Mapping strategy of 11 PTNbh which is done by the government is aimed to achieve world class university.

The present position of the 11 PTNbh can be checked in the data provided below.

Table 1.1: Achievement position of 11 PTNbh

No	Name of PTNbh	World Rank 2018	Asia Rank 2018
1	Universitas Indonesia	292	57
2	Institut Teknologi Bandung	359	73
3	Universitas Gadjah Mada	391	76
4	Universitas Padjadjaran	651-700	225
5	Institut Pertanian Bogor	701-750	130
6	Universitas Airlangga	751-800	199
7	Universitas Diponegoro	801-1000	271-280
8	Institut Teknologi Sepuluh Nopember	801-1000	229
9	Universitas Hasanudin		401-450
10	Universitas Pendidikan Indonesia		451-500
11	Universitas Sumatra Utara	#	#

Source: ministry of research and technology and higher education 2018

Higher Educations that were oriented to achieve the top 500 world rank is UI, ITB, and UGM, while Unpad is at the rank of 651-700, IPB is at the rank of 701- 750, Unair is at the rank of 751- 800. In addition to it, for the Asia top rank, Unhas is placed at 401- 450, together with UPI, is at 451-500. The last data from the above table, at the time being USU has not been targeted to be in ASEAN, Asia, or World class.

Meanwhile, other ASEAN Universities which have been already at the top 500 world rank is Namyang Technological University Singapore is at 12th rank, University Malay (UM) is now at 87th rank, and lastly, Wageningen University is at 125th rank. In order to achieve our goal, we need infrastructure, government support, and sufficient funding. Let's say, University of Chicago can achieve at the top 500 world rank after two decades and has spent great amounts to achieve the rank. How long can universities in Indonesia be at this stage and what should the suitable strategies be applied to achieve the aim?

2. PROBLEM AND FOCUS OF STUDY

Problem and Focus of the study for this research are:
- What is the output that can be gained as a result of upgrading the quality and competitiveness of higher education?

- Has the aim been in accordance with policy requirements in order to upgrade both the quality and competitiveness of higher education?
- How is the outcome of using the current policy towards the upgrade of higher education's quality and competitiveness?

3. AIMS OF THE STUDY

The aims of the study for this research are:
- To identify both output and outcome achievement levels after upgrading the quality and competitiveness of higher education.
- To analyse output and outcome by measuring these two points with world class university (WCU) criterion.
- To recommend policy improvement and innovation which is suitable for global competition and industrial revolution 4.0 or the demand of society 5.0.

4. RESEARCH OUTCOME

The outcome of this research is the lecturer's capacity building strategy which is applicable to globally standardized Higher Education.

5. LITERATURE REVIEW

This study is based on various disciplines which are relevant to Higher Education level management to achieve globally standardized university. Theories supporting are globalization, management of change, and world class university.

5.1. RESEARCH ON UNIVERSITY GLOBALIZATION

Globalized premises are needed to analyse Higher Education levels related to education. These comprise:
- Globalization is a social phenomenon affecting most factors, especially in human resources development.
- The role of educational institutions, particularly, Higher Education level, which produces professional manpower is charged to do approach, theory, methodology, the conceptual framework of professional human resource development that is relevant to job demands (Mittelman, 2000, Gidden, 2000, Skger 2003).
- Higher Education has roles in developing knowledge in politics, economy, culture, technology, as well as, of having responsible for upgrading national quality standards.
- Higher Education requires relevant concepts and strategies to integrate disciplines and culture into vision, mission, goal, and strategic planning in *Tri Dharma* Development, as a result of society and global demands.
- As an agent of change, Higher Education should be autonomy and independence, as an effort to prepare national competitiveness in globalization with proper strategy.

5.2. MANAGEMENT OF CHANGE

Fundamental changes are required to place a Higher Education to be the same level as other world class universities to create a better competitive situation. It means that Higher Education has to prepare long term strategy, as well as, management of change. The change is a certain thing happening in the world. Let's say an organization. It is formed and run by people. Originally, people are very dynamic, any things can be changed from time to time over the period by people management. The only certain thing in this life is change itself.

Change can be identified as something happening. In an organisation, it is divided into micro and macro scales. Change happening continuously in small scales is called as first-order change or continuous improvement, while, macro scales, which is multidimensional is known as second-order change. Usually, both kinds of changes are applicable for organisation depending on the factors influencing in the change process. To keep its existence, organisation has to change based on the situation at any time. The change should be planned, formulated, and managed well in the purpose of keeping the organisation in good condition (Robbin, 2013).

Information regarding change can be collecting from any sources, nevertheless, the decision whether the change is suitable to be applied or not is fully the authority of the organisation leader. In macro scale and strategy, the term related to it is commonly said that" strategic decision is made by the strategic leader". In relation to higher education, Rector is the strategic leader. Hence, lecturers that play as the higher education community member should have to drive change as an agent of change (Bateman and Snell, 2002). The human resource that is one of many other affecting factors in an organisation takes an important role in the change process. Human capital has driven change in higher education to play its role as what people expect. It is determined by some points comprising lecturer qualification, capability, relevant competence with the field, level of higher education (bachelor, master, and doctoral degree) and sensitivity. There is a tendency that human resources and educational levels have been upgraded which means that science, skills, attitude, and values keep developing continuously. Likewise, people mind-set and higher education human resources keep adjusting to information, culture, economy, communication technology, and industry. Of course, it will have impacts on the higher education's role and function as both an agent of change and professional manpower producer.

At the present time, facing domestic and foreign competition, efforts are needed to compete with others to get the market. Competition has led to consumer change behaviour, which in return, it also has affected on good and service producer. It is the same way as it applies in the education field, especially higher education as the main agent to produce human capital. Competition among higher education is getting tougher. The new higher education offers and introduces various programs, while, the former higher education keeps maintaining and upgrading quality to survive and to keep existence. On the other hand, the government also takes part in adjusting regulations to drive change on the strategic planning of ministry of research and technology and higher education in regional and global scope related to higher education quality standard and strategic targets for PTNbh (Ministry of research and technology and higher education, 2015-2019, referring to the minister of research and technology and higher education regulations, no. 13, 2015) .

The strategic plan of Ministry of research and technology and higher education is set out in minister of research and technology and higher education which implies on policy directions and programs of higher education strategic plan. In relation to it, the strategic plan set by UPI cannot be apart from the demands of the strategic plan of ministry of research and technology and higher education. UPI strategic plan as of 2016-2020 is a part of any efforts to achieve the quality standard and educational service as the process of going to be in world class university, along with, educational service for all Indonesian people (Strategic plan 2016 and 2020, UPI, 2017).

Concerning the change in the organization as a result of those affecting factors, it can be classified into four classes: 1) the structural change in the organisation, policy, and the number of people; 2) technology change in software and hardware; 3) physical setting (layout); 4) human resource related to attitude, mindset, skill, and personal belief on values (Robbin, 2013). Among the above factors, mindset is the most challenging to change. It is not a matter of replacing one's position with the new one, but this is how to adjust mindset and behaviour. The actual problem is lied on how long one stays in a comfort zone. When there is new regulation demanding to switch previous working way to a new pattern, there might be personal denial. This kind of refusal or reluctant attitude towards new regulation is so called resistance.

In relation to the management of change, it can be defined that making change is an act of taking the opportunity to achieve success. When someone decides to change, there will be some risks following the action. Hence, resistance is one of the risks that might be taken and it also gives disadvantages for an organisation where tough competition takes place. Resistance can be done by a single person, group, or even an organisation (Ahmed, Lim & Loh, 2002). Below are resistance factors that usually come along with change.

- Work Habit

At this point, someone usually feels reluctant and try to resist new working way and position, since, it is commonly believed that facing this matter will contribute to many troubles in the future and create an uncomfortable situation.

- Safety

Feeling insecure of being dismissed or losing present position.
- Economy

Worried about getting lower income than the present position, this is the reason why salary consideration has become the top priority.

5.3. DETERMINING FACTORS OF WORLD CLASS UNIVERSITY (WCU)

Many factors determine the success of university leaders in achieving world class university. However, Philip G. Altbach (20186-8) identified four (4) main factors, which are as follows:
- Excellence in research sustained by the minds of world-class researchers.
- Academic freedom and pleasant intellectual environment are considered as the essential factors of WCU.
- Realistic and objective perspectives are needed in thinking quality learning.
- Not too focus on teaching WCU status because it can ruin the academic system.

Actualizing WCU at the University of Chicago requires quite a long time (two decades) and very high costs. Meanwhile, at King Abdul-Aziz University to get 400 WCU ranks can be achieved with strategies including 1) increasing the distinguished academic standard; 2) building adequate infrastructure; 3) sufficient funding; 4) consistent government support (policy) so that the Higher Education becomes more modern and well known internationally.

6. RESEARCH METHODOLOGY AND DATA COLLECTION

There were three important research method as follows.

6.1. APPROACH

The approach was carried out quantitatively and qualitatively, known as a mixed- method, (Creswell and Clark, 2007) which was through two phases described as follows.
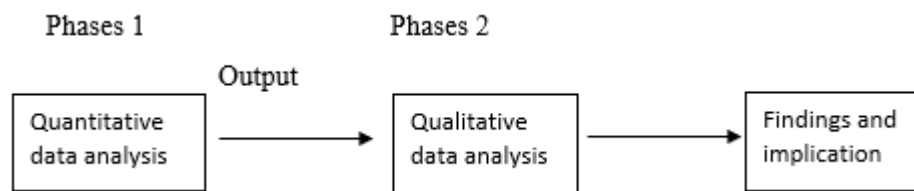
The research design used Explanatory Design adapted from Creswell & Clark, 2007.
This research used a survey method carried out in PTNbh, by taking Indonesia University of Education (Indonesian: Universitas Pendidikan Indonesia, UPI) as the research object. The research was conducted in 3 phases. The first phase was carried out in 2018, the second phase was carried out in 2019, and 2020 was the final phase of research.

6.2. RESEARCH ROADMAP

Phase 1 (2018)	Phase 2 (2019)	Phase 3 (2020)
Desk Study	Designing mindset based PKTA Model	Impact evaluation
Needs assesment	Capacity gap analysis	Key Performance Indicator
Identification of needs	Developing priority programs and targets	Model review
Determination of the	(material of mindset modification)	Outcome
target	Principles (learning mindset technology)	Quality and quantity enhancement
Source allocation		of the doctoral degree

Determining concrete steps of PKTA		Quality and quantity enhancement of professor Output Material of journal; Intellectual property rights Colloquium proceeding (nasional dan Internasional)

6.3. CAPACITY BUILDING MODEL
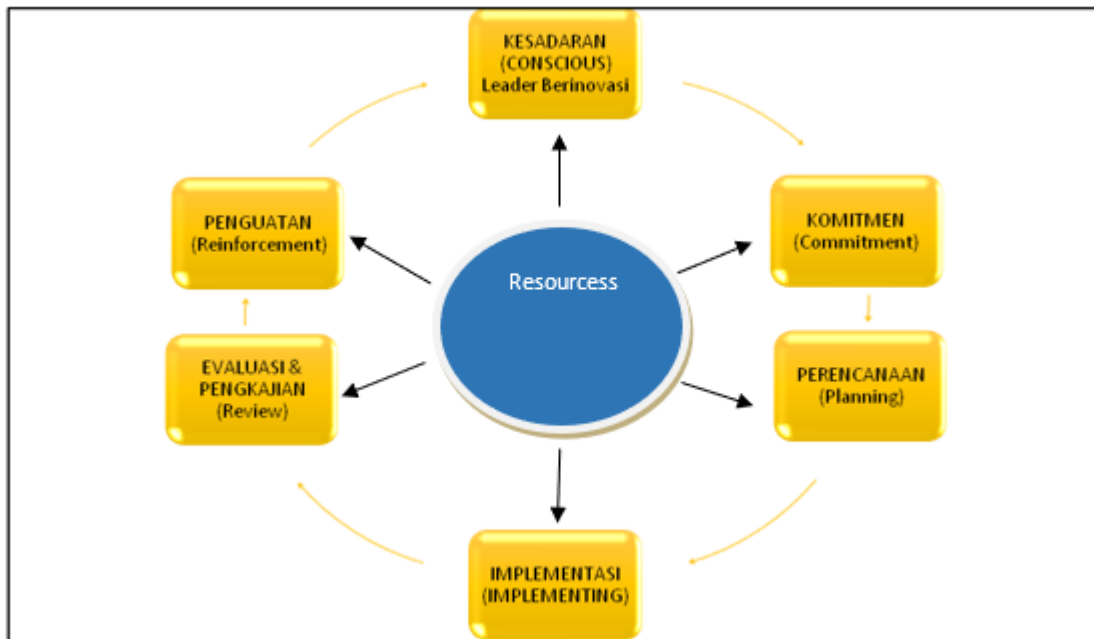
Source: Nick Foskett, 2010

7. RESULTS AND DISCUSSION

The achievements related to academic reputation such as the number of indexed articles per lecturer were still very low at 1.35. The number of citations per lecturer was 1.06, and the number of patents per lecturer was 0.10. Based on the world standards, publication ratio per lecturer was 132.89%. National University of Singapore (NUS) obtained publication ratio of 115.38%, and Indonesia University of Education (UPI) obtained publication ratio of 5.96% with a shortage of 1.630 articles.

It means that the World Class Researcher owned by UPI was still very low compared to NUS. Likewise, the World Class Researcher owned by UPI compared to Bandung Institute of Technology (ITB), Indonesia University (UI), and Gajah Mada University (UGM) with other PTNBH, was still very low. As an illustration, ITB 26.30%, UI gained 17.04%, and UGM gained 12.00%.

Various efforts had been made to gain a reputation in this academic field through programs, as follows: a. World Class Researcher; b. World Class Laboratory; c. World Class Institution; d. Publication in Top Tier Journals; e. Active in the world-level scientific association; f. Promotion of local scientists to obtain world-class scientific medals (Best Paper Conference or Journal Field Medal); g. Website and social media that were updated, informative, and attractive.

The acquisition of UPI's University World Class rank was relatively lower compared to other PTNBH. Based on QS AUR (2019), the position of UPI comparing to other PTNBH could be described as follows.

UI: 57, ITB: 73, UGM: 74, IPB: 130, UNAIR: 199, UNPAD: 252, UPI: 450-500, and UNY: 451-500, while at the top of all was the National University of Singapore (NUS).

Achievements (Output) of UPI Performance (2020)	
Academic Reputation	15. 4
Employer Reputation	9. 9
Faculty Student	8. 3
Staff with Ph.D.	1. 9
Citation per Paper	1. 9
Paper per Faculty	2. 8
International Research Network	6.5
International Faculty	3. 2
International Student	1. 6
Inbound Exchange Student	29. 6
Outbound Exchange Student	12. 7

Source: UPI At Glance, 2019

Table 1.2: Indonesian Higher Education ranking: QS AUR 2019l

	Higher Education	NUS	UI	ITB	UGM	IPB	UNPAD	UPI
a.	Academic Reputation	100	67.3	66.7	68.7	38	26.3	15.4
b.	Employer Reputation	100	83.7	75.7	68.8	38.9	43.4	9.9
c.	Faculty Student Ratio	97.2	62.4	52	48.8	36.2	50.9	8.3
d.	Faculty Staff with Ph.D.	100	2.9	41.4	1.1	74.3	1	1.9
e.	Citation Per Faculty	100	11	7.8	7.5	8.2	8.1	1.9
f.	Paper per Faculty	66.2	5.3	16.9	4.3	7.2	2.4	2.8
g.	International Research network	100	70.4	53.7	63.4	49.2	23.8	6.5
h.	International Faculty	100	93,9	42,1	36,5	34.3	9,1	3.2
i.	International Student	100	22.8	9.4	9.1	12.9	8.1	1.6
j.	Inbound Exchange Student	100	97.3	5.5	84.5	51.2	14.6	29.6
k.	Outbound Exchange Student	100	96.3	30	47.4	43.2	12.7	12.7
l.	Total Score	100	60.8	53.8	53.3	37.9	26.6	5-11.1
	Ranking	#1	#57	#73	#74	=130	#225	451-500

Source: UPI RAPIM on WCU, 2019

Based on the data above, it could be interpreted that the achievement of the University's performance from the aspect of academic staff was still very low so that still required real effort. Comparing to World Class University such as National University of Singapore (NUS) which was ranked 8th in Asia, UPI's rank was still left behind. NUS had fulfilled international standards with 74.42% of doctoral degree ratio from all staff, while UPI had just reached 43.15% (1.9). Based on the data that could be obtained, UPI still lacked 402 lecturers who were currently qualified as doctoral degree. Likewise, the ratio of UPI international lecturers still did not fulfil the standards compared to international standards, which were at a minimum of 34.10% of all lecturers that fulfilled international lecturer competencies. Currently, UPI only reached 0.55% (7 people) out of 1.284 lecturers, which is a shortage of 438 lecturers who were competent to be world class lecturers.

Problems related to the low achievements in fulfilling the needs of lecturers with doctoral degree qualification had been responded by the leader of Higher Education despite they still needed the right alternative solutions or effective policies. There were programs related to efforts to enhance lecturers so that they had the doctoral degree qualifications. First, increasing the research incentive budget for lecturers who were taking doctoral programs. Second, scholarship awarding for the doctoral degree, and last, giving opportunity to have foreign exchange program.

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Meanwhile, to improve competence for international lecturers was so create a non-civil servant human resources system scheme that had high capabilities and performance targets according to WCU.

The main function of Higher Education was to produce human capital, which had a high competitiveness in responding to global opportunities and challenges. It meant that a university consisting of its faculties and study programs could produce graduates who had wold class competencies.

8. FINDINGS, CONCLUSION AND IMPLICATIONS

8.1. RESEARCH FINDINGS

Research findings in general of Higher Education still required
- Graduates' output standard on aspects of timeliness and waiting period of work, the relevance of implementation and income, number of international standard scientific publications, citation of lecturers' scientific publications.
- Standardization of services provided by the university to students according to students' expectations and satisfaction, and the value charged in obtaining economic, social, and sufficient funding.
- The commitment of Higher Education lecturers and leaders in internationalization efforts as outlined in the general strategic plan.
- Network development from the perspective of the internationalization of Higher Education.

8.2. CONCLUSIONS

- The challenge of Higher Education with global competitiveness in the future is to increase international cooperation, especially in the field of research and the quality enhancement of digital learning to face changes in student behaviours which lately show impatient in doing the same thing in a long period and familiar with communication technology.
- Higher Education leadership and management should have the ability to inspire and to transform the values of academic integrity, awareness of internationalization, the need to innovate, commitment to increase capacity building in mobilizing various resources such as human resources, material resources, and good informational resources that inside and outside of Higher Education.
- Capacity building programs in the perspective of internationalization should focus on academic aspects in the field of international learning and research, curriculum and pedagogy development, digital learning innovation, which is carried out continuously (Developing Sustainability).

8.3. IMPLICATIONS

There are so many ways to respond to megatrend which affects on change of development strategy of Higher Education, policy, leadership, and management. The change in cultural, approach, and orientation demand a person to understand the aim, benefit, and outcome. Nevertheless, the change focus is lied on the awareness of Higher Education leaders to make the changes (Conscious transformational change leadership).

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CONFLICT OF INTEREST

The author have declared that no competing interests exist.

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