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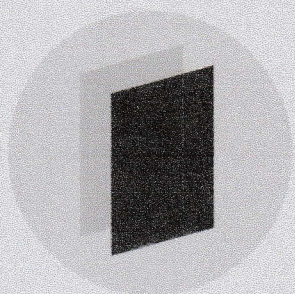
2nd International Conference on Innovation in Engineering and Vocational Education (ICIEVE 2017)

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Preface

The 2nd ICIEVE 2017, the International Conference on Innovation in Engineering and Vocational Education, held on October 25-26, 2017 at Aryaduta Hotel, Manado, North, Sulawesi, Indonesia, is hosted by Universitas Pendidikan Indonesia (Indonesia), Universitas Negeri Manado (Indonesia), and Rajamangala University of Technology Thanyaburi (Thailand).

The conference was a platform for scientists, scholars, engineers, industrial professionals, and researchers to exchange, share, and discuss their innovation, experiences, research works and problem solving techniques in all issues in engineering and vocational education.

The participants of ICIEVE 2017 were from around the world with a variety of background, including academics, industry, and even well-known enterprise. In general, there were 140 papers discussing such various topics as engineering and technology innovation (mechanical engineering, chemical engineering, civil engineering, etc.), engineering education (basic science in engineering education, engineering education reforms, new technologies in education, etc.), and vocational education and training (industry-driven training programs and collaborations, lifelong learning – reskilling and upskilling, government and policy, etc.).

We would like to thank all of those who helped and supported ICIEVE 2017. Each individual and institution's support was very important for the success of this conference. Specifically, we would like to acknowledge the advisory board, scientific committee, and organizing committee for their valuable advice, help, suggestions, and support in the organization and helpful peer-reviewing process of the papers. This year, we would like to express our deepest gratitude for all the co-hosts of ICIEVE 2017, UNIMA, Indonesia, and Rajamangala University of Technology Thanyaburi, Thailand for the collaboration. We would also extend our best gratitude to keynote speakers for their valuable contribution for sharing ideas and knowledge in the ICIEVE 2017.

We sincerely hope that ICIEVE 2017 will be a forum for excellent discussions for improving the quality of research and development in relation to innovation in engineering and vocational education. We also hope that this forum will put forward new ideas and promote collaborative researches among participants. We believe that the proceedings can serve as an important research source of reference and the knowledge. Indeed, the proceedings will lead to not only scientific and engineering progress but also other new products and processes for better science and technology in vocational education.

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Strategic Planning towards a World-Class University

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Strategic Planning towards a World-Class University

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Abstract. Strategic planning with a focus on world-class university status is an option that cannot be avoided by universities today to survive and succeed in competition as a provider of higher education. The objective of this research is to obtain exploratory research results on the strategic plans of universities that are prepared to generate world-class university status. This research utilised exploratory qualitative research method and data was collected by in-depth interviews method. Interview transcripts were analyzed by using thematic content analysis through NVivo software analysis and manual systems. The main finding of interview shows that most interviewees agreed that UNIMA has been engaged in strategic planning. Contribution from faculties and schools are acknowledged and inform the planning process. However, a new model of strategic planning should be adopted by UNIMA due to the shift towards a “corporate university”. The finding results from documents, literature review and interview were the addition of world-class university characteristics and features to current strategic planning of UNIMA and how to upgrade by considering to use the characteristics and features towards world-class university.

1. Introduction

The word of world-class university has become a catchy phrase. This status can describe the university's research level as the culmination point of higher education. The paradox of world-class university mentioned as statement "everyone wants one, no one knows what it is, and no one knows how to get one "[1].

However, the existence of a world-class university today is inevitable. The ranking status makes the universities of the world competing to improve the achievements which lead to elitism that brings pros and cons. Building world-class university does require high cost and very expensive investment. To meet the world class university status requires a lot of hard work. Internationalization ranking is a tool for strengthening educational goals and improving the performance of universities.

The need of universities to obtain world-class university status becomes a very important framework for most universities in Indonesia. Higher Education Strategic Planning is an official document that determines policy direction, decision making and institutional strengthening within the university. Strategic planning with a focus on world-class university status is an option that cannot be avoided by universities today to survive and succeed in competition as a provider of higher education.

The Indonesian government has also emphasized the need for internationalization for universities through the University's Long-Term Strategy 2003-2010, which declared that universities in Indonesia are expected to improve their competitiveness and quality significantly to compete globally [2]. It is undeniable that the status of world-class university brings more prestigious benefits and impressions for



the university, despite the many challenges to be faced. Most universities in Indonesia cannot carry out high quality research and have below standard quality of teaching [3]. Universities in Indonesia must improve quality, ensure the reformations for key issues such as funding, policy, institutional and academic quality and access to have better positioning at regional and global levels.

World-class university has a different understanding both the target and assessment criteria. The ranking of universities is conducted by several institutions or organizations such as Shanghai Jia Tong University Rankings, Times Higher Education Supplement (THES), Webometrics Ranking of World Universities, International Rankings Experts Group & The Berlin Principles, Global University City Index, World Education News, Academic Ranking of World Universities and QS World University Ranking. Each of organization has different indicators, for example QS World University emphasizes criteria on research quality, teaching quality, graduate employability, and international outlook. It is very important to pay attention to these indicators in designing strategic planning to embody world-class university status.

1.1 Research Background

The main problem faced by universities during the preparation of a strategic plan is the concept of strategic planning which should adapt to the need for world-class university status. This situation is relatively new to the world of higher education institutions in Indonesia, especially Universitas Negeri Manado (UNIMA). In fact, the current ranking of UNIMA is far from world-class university. According to Unirank's website UNIMA's world rankings is 8759 [4]. Data from Webometric UNIMA's national ranking is 232 and world rank is 13582 [5].

Based on the above information, UNIMA's ranking is still far below the standard to achieve world-class university status. Therefore, strategic planning which emphasis on achieving world-class status is an urgency to be implemented. Through the strategic plan UNIMA can prepare the reformation and restructure its organization. To achieve world-class university status the institution requires solid leadership, vision, mission and bold objectives and articulate strategic planning to clarify the vision in the form of concrete targets and programs. Colleges must be able to achieve maximum results, show improvement, set new goals, design and implement new strategic plans to achieve the desired results [6].

This research was conducted to improve the development of strategic planning in Universitas Negeri Manado, Indonesia to upgrade existing strategic planning in preparation for world-class university. The specific purpose of this study is to provide advice and references to strategic planning at UNIMA, by proposing alternative innovative strategies; recognise the various institutional resources that can support the strategic planning process at UNIMA; and recommended strategic planning by considering the criteria and indicators of world-class university that can be used as a preparation, to be able to compete globally which lead to the initiation of world-class university.

2. Research Methods

This research used exploratory qualitative research method and explored the strategic planning of university, obtained from the in-depth interview result and library study result about strategic planning in the higher education institution, collecting the documents that relevant and researchers' observations to gain a deeper understanding of the actual state of strategic planning at UNIMA.

2.1 Data Collection Technique

Data collection techniques are through interviews, documents and research notes from observations (field notes) [7], [8].

1. Interview

The Interview was conducted to obtain information on the strategic planning process at UNIMA, various resources that can support strategic planning in UNIMA, as well as suggestions to be taken into consideration of the preparation of strategic planning for UNIMA towards world-class university.

2. Documentation

The relevant UNIMA documentation, such as planning documents, resources, facility development, and other documents, collected after approval.

3. Observation

Researchers did observations by noting the important and relevant data to the purpose of research.

2.2 Respondents and Selection Criteria

Interviews were conducted for the Rector and Vice Rectors, Deans and Vice Deans, academic and administrative staff who have experience and involved in the preparation of strategic planning. Respondents were selected randomly. The number of respondents targeted in this study were 40 respondents with the duration of the interview for 45 minutes - 1 hour.

Interview conducted with guidance of research instrument containing questions. After the interview, respondents had the opportunity to read the transcript of the interview and respond if necessary before the researcher concludes the interview.

2.3 Data Analysis Technique

In this study, interview results were analysed using thematic content analysis. Documentation and observation results (field notes) analysed and selected based on relevance to the interview results. Interview transcripts are coded and partially processed using NVivo software and some were done manually. The researcher recorded each interview process, issues related to interview answers and other additional information. The transcript was read and the narrative meanings were identified with the codes. The codes were reviewed again and developed in the form of "themes". The codes are then developed with NVivo. Some notes were written manually, and transcript interviews were made in hardcopy. This study has the possibility of inaccurate data collection and interpretation. In addition, researchers have limitations in the presentation of research results in a comprehensive and precise. Recognising these possibilities, researchers applied triangulation protocols, which include triangulation of data sources, research and theories, and methodologies, so the validity and reliability of the research can be maintained.

3. Results and Discussion

3.1 Strategic Planning in UNIMA

The vision in the strategic plan of UNIMA is "Becoming an excellent, innovative, competitive institution in performing education, research and community service programs. The missions are:

- Improve the quality of institutions in UNIMA
- Improve the quality of education, research and community service
- Create the availability of affordable education for community
- Improve the quality of resources
- Prepare the financial management to be a corporate university alike
- Produce the qualified and professional alumni [9]

The findings on the interview show that there are several items that should be considered in designing UNIMA strategic planning. The respondents' comments in the theme of suggestions for UNIMA strategic planning are presented below:

- The strategic planning process required the bottom-up approach; the initial process is started from the lower management to the top management.
- Should review the planning term, persons, model of planning and sufficient finance.
- Human resources should be the great asset in strategic planning.
- The planning should be followed by accountability and well implemented
- Strategic Planning should involve stakeholders and expert and the feedback of the stakeholders should be accommodated.
- Involved every department concerned in strategic planning process.

- Strategic Planning should also concern with the facilities and Information and Technology.
- Team is required for monitoring and evaluating
- Establish a high-quality planning but easy to be implicated.
- Well implemented of strategic planning is required
- Strategic Planning should fit with the condition in UNIMA.
- Involve the local government in strategic planning.
- Develop the established vision and mission.
- Planning should emphasised the academic activities

The respondents agreed that in the process of generating vision and mission of the university, recommendations were collected from all faculty and school and there was assessment of external and internal environment. There is an annual evaluation to the implementation of short and long-term planning. The long-term planning consists of UNIMA's future direction which is achieved by fulfilling short-term goals and objectives. As one of the interviewees expressed as follows;

“The planning process in university has developed significantly, it was started from the work meeting in faculty which is never done in previous years. The work meeting held beginning from the program in faculty and study program then the result of this was presented into the level of university work meeting. The outcome of the meeting then implemented to the whole faculties in university as strategic plan. At the end of term each of faculty report the accountability and gathered together to construct the next planning.” (Interviewee no.3)

All interviewees emphasised the need to develop new model of strategic planning. Two interviewees spoke at length and in depth about a corporate university, primarily because UNIMA should adopt “corporate university” paradigm and to be able to accommodate opinions revealed from annual evaluation. In addition, all interviewees asserted the need to involve all stakeholders in planning processes. In terms of important items to be included in an appropriate planning model for UNIMA, 3 interviewees suggested that the model should be able to figure out systematically operational activities to achieve goals and objectives because there are financial constraints for UNIMA. The interviewee number 2 stated:

“Unima should develop a new model of strategic planning due to this university will shift to the corporate university, and in this new status it is important for UNIMA to approach the stakeholders and involve them in the process of strategic planning. In the corporate university, the fund from government will be deducted and UNIMA should make the effort to fund the university. In the next future, the process of strategic planning will be supported by stakeholders that consist of community, industry, association and non-government office”. (Interviewee no.2)

Regarding the resources in designing strategic plan UNIMA has some academic staff who have returned to the university after finishing their study in overseas university which classified as world-class university. They can provide their expertise to the planning processes in UNIMA. External experts can be hired as consultants and not involved directly in most parts of the processes. Similarly, three other interviewees emphasized the need of support from stakeholders and the importance of gaining advice from management experts, said that adequate finance is a pre-requisite to develop appropriate planning processes. One of the interviewees also stated that one of the most important resources is experienced administrative staff and previous strategic planning documentations. As one of the interviewees articulated below:

“UNIMA has sufficient human resources which is 80-85% of academic staff possess post graduate and doctorate degree that graduate from internal university in Indonesia or from abroad. Their expertise can bring great contribution for strategic planning process. Another resource is the fund granted from government to facilitate learning process such as books, computers and laboratory instruments. In fact, government funding and university revenue also important for budgeting in constructing strategic planning”. (Interviewee no 5)

All interviewees asserted importance of stakeholders' participation in the development of UNIMA generally. When asked about importance of good communication, one of the deans stated that close and

mutual relationships that are generated from good communication among all stakeholders are essential in gaining their participation.

The results show that most interviewees stated that UNIMA has been engaged in strategic planning at some level. Contribution from faculties and schools are acknowledged and inform the planning process. However, a new model of strategic planning should be adopted by UNIMA due to shift towards a “corporate university”. It was recognised that the involvement of stakeholders is crucial in planning processes. UNIMA may have the human resources from staff who have returned from overseas study, which will be able to contribute their expertise in planning process and the university may hire the external experts as consultants in strategic planning process.

3.2 Strategic Planning towards World-class University

The finding results from documents and literature review regarding the current strategic planning of UNIMA and how to upgrade by considering the characteristics and features towards world-class university can be seen in the table below:

Table 1. UNIMA Strategic Planning and Features of World-class University

No	Strategic Planning of UNIMA	Program Indicators	The essential features and characteristics towards world-class University
1	Improve the quality of institutions in UNIMA	-Refinement of regulations -Improvement of service	-Commitment to be an excellence university -Participation in the latest and most advanced researches and regarding education, powerful and meaningful communication between education and research.
2	Improve the quality of education, research and community service	-Enhancement of research activities -Strengthening the Research and Community Service Center -Strengthening the Instructional Activities Fostering and Development Agency -Empowerment of Quality Assurance Agency and Internal Audit, and Internal Control Unit	-Researchers’ freedom and academic freedom. In this case, they have freedom in: 1) creativity and innovation, 2) freedom to get rid of bureaucracy and unnecessary limitation 3) freedom from arbitrary decisions of financing 4) Freedom to choose partners 5) Have wide access to cooperate with the industry through open interdisciplinary of education and research [10], [11].
3	Improve the quality of resources	-Increase the number of professors -Doctorate degree for academic staff -Certified lecturers -Competence Training for academic and administrative staff -Perform linearity between educational background and competence -Performance improvement of technician, administrative, and laboratory staff -Reward and punishment system -Discipline for academic and administrative staff	-Promotion of Internationalisation strategy: 1) Bilingual teaching and learning 2) Summer schools, exchange students and internship 3) Dual degree programs and joint institutes [12].

4. Conclusion

Constructing strategic planning towards a world-class university is a challenging, brave, and time consuming effort. In reaching the world-class status, the university such UNIMA may turn the current conditions into opportunities, for example; to transform the research center at international standard and the outdated management style to strategic management. The focus can be shifted from local standard to international standard and from national competition to global competition.

The road to world-class university will have an exorbitant budget and seems impossible to reach. The ambition to reach world-class university status in UNIMA is still very long way to go. However, through strategic planning, which designing with thoughtful and realistic plan, the university can initiate the program by inserting the criteria and features of world-class university. It may not reach the status immediately but as first attempt, it can start to elevate the national ranking and may lead to increase the international ranking. This starting point can lead the university to slowly fulfil the ambition in achieving world-class university status.

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