

# STRATEGIC PLANNING IN ENHANCING RESEARCH ACTIVITIES AND PUBLICATIONS AT BINA NUSANTARA UNIVERSITY – INDONESIA

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## ABSTRACT

*Established in 1981, Bina Nusantara University (UBiNus), Jakarta, is one of the largest private-sector institutions in Indonesia. With more than 27,000 students now, UBiNus initially focused on strengthening and enhancing the number of its academic programs. However, this paradigm shifted when 2020 Vision was announced by the University's Board of Management in 2010. UBiNus started focusing on increasing the number of research and publications through its available resources. This required strong commitment and strategic planning at the beginning, a brief account of which constitute this paper. UBiNus has achieved the rank of 13<sup>th</sup> best institute for its publications by Scopus out of 3,151 higher education institutions in Indonesia. The university continues to focus on its research programs and activities.*

**Keywords:** *Research, Publication, Private university, Developing country, Strategic planning*

## 1. INTRODUCTION

Located in Jakarta and South Tangerang, Bina Nusantara University (UBiNus) is one of the largest private-sector universities in Indonesia. When it was first established in 1981, UBiNus was a computer college focusing on computer education, including management of informatics, computerized accounting, computer sciences, and computer engineering. In 1996, the college spread its wings to become a university focusing on engineering, natural sciences, management, culture or languages, and computer education. Although UBiNus had many academic programs, computer education (Prabowo, 2007) was given highest priority. Therefore, all courses were expected to be delivered (taught and learned) using computers. In the recent years, the Board of Management and the Rector focused on improving computer facilities, the quality of academic programs. Several efforts were made in order to attain a better service-quality higher than those in other universities of Indonesia. By adopting ISO 9000 in 1996 (Idrus, 1999), UBiNus became the first University in Indonesia that complied with Service Excellence (Anderes Gui, et al., 2012). UBiNus also focused on the quality of graduates it produced by aligning the curricula with the needs of the industries, which resulted in 70% of graduates getting jobs upon

graduation. Through active research and marketing activities (Iskandar, 2014), UBiNus also tried to enlarge the number of faculties and offered a variety of study programmes (<http://binus.ac.id>). That is why today UBiNus has become one of the most valued private universities of Indonesia.

The university not only focuses on improving the quality of its graduates and alumni, it also strives to help below-average students through its Student Advisory Center that is responsible for assisting the students in improving their academic performance. Currently, UBiNus has more than 27,000 enrolled students and around 1,500 faculty members. Earlier, all efforts of the university were focused on improving the teaching quality, including lecture preparation, materials to be delivered, programmes on students' achievements, collaborations with industries, e-learning (Ratna, D. K., Suliman, A., 2003), and teachers' training. Although, research activities and paper writing were done by the faculty members, the number of publications was still minimum as compared to other achievements. The reason was that in the past UBiNus only provided basic level laboratory facilities, and the development activities were merely conducted at computer laboratories. Furthermore, some study programs having collaborative arrangements with other research centers had no laboratories. However, since the University's Board of Management in 2010 has introduced its 2020 Vision, this situation is bound to change.

The 2020 Vision is depicted in Figure-1, which shows that the emphasis of the university is now on the high-impact research and academic quality that would lead to its sustainable growth. Human resource, innovation, and excellence are the main focus of university's development program in order to achieve the high-impact research and improve the quality of education. This new paradigm is expected to improve the research activities and publications, both in number and quality. Moreover all the research results are encouraged to become learning materials for classroom activities (Michael, Richard & Rebecca, 2007).

## 2. STRATEGIC PLANNING

As discussed earlier, the university has now shifted its focused on research activities in order to improve its

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Figure-1: 2020 Vision of Bina Nusantara University

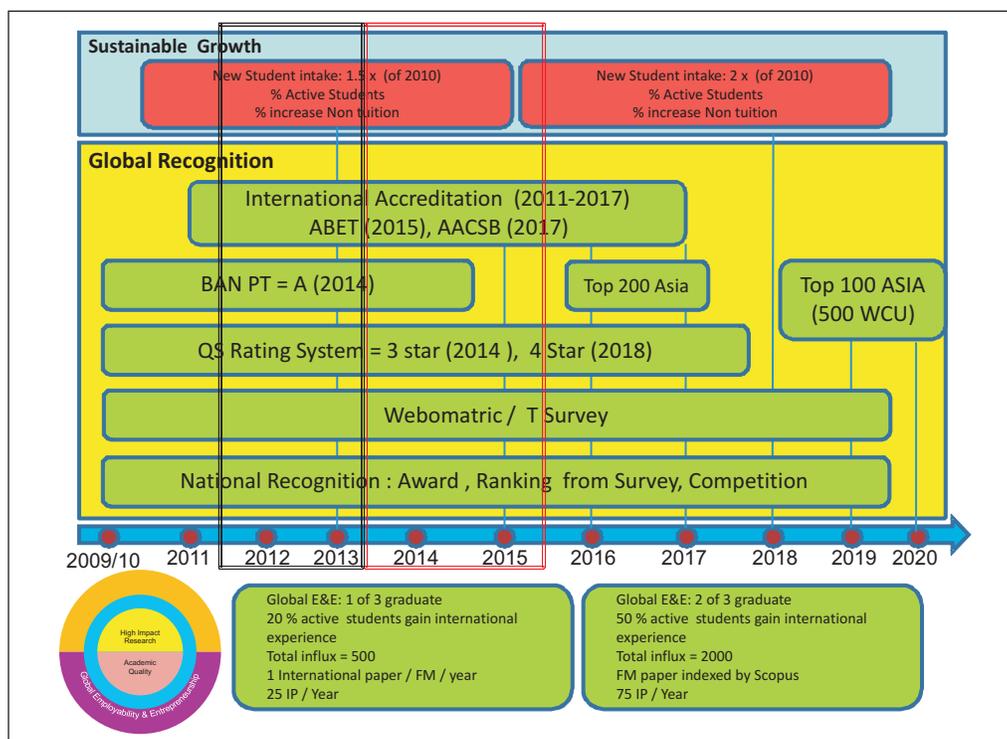


Figure-2: Roadmap for achieving Strategic Objectives under 2020 Vision

overall academic quality. Thus, the university will not only lead to increased number of research products, but also attract industries' collaboration. If this activity can enhance the number of collaborations, it could also enhance the employability and entrepreneurship opportunities for UBInuS students. The same would

increase the stakeholders' trust and resultantly attract more students to join the university. The trend can be seen by the increasing number of registered students from over the years with the current total student enrolment of 27,000 (2013), which is expected to further increase the coming years. However, this

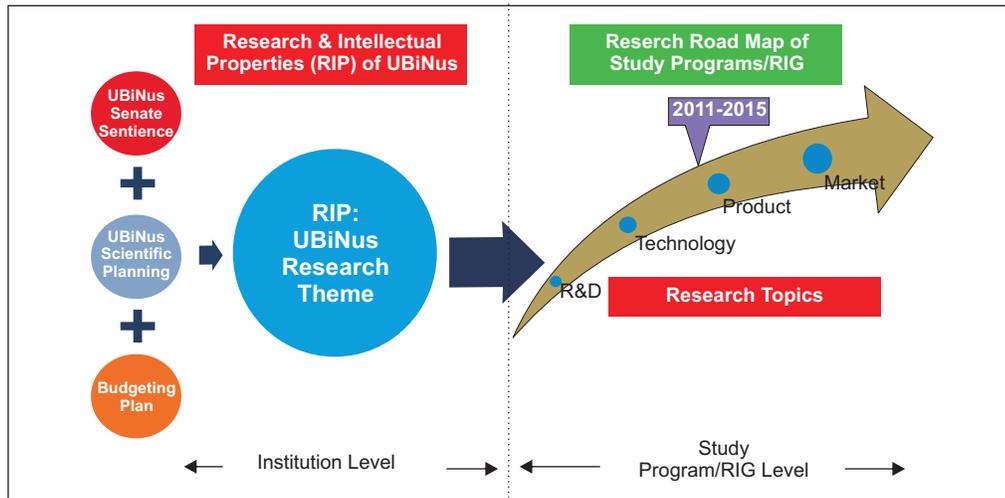


Figure-3: High-impact research: contribute to problem solving at national level

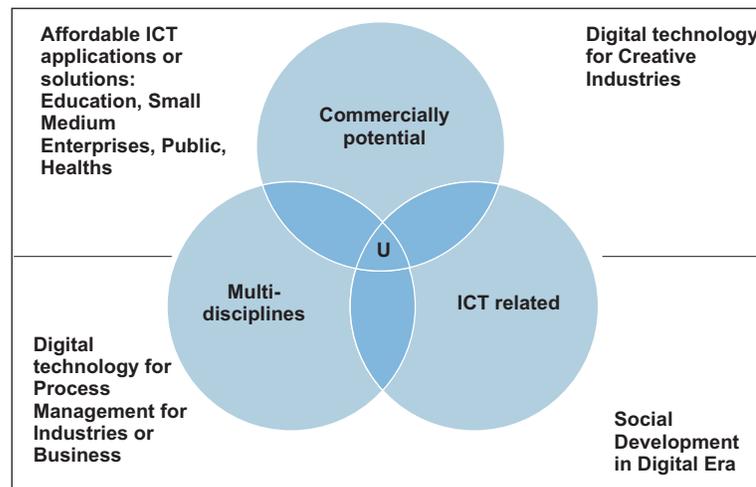


Figure-4: UBiNus Research Themes which are inline with National Needs

vision cannot be realized without having elaborate strategic objectives and until these objectives are made a part of a working plan for each staff that can later be evaluated in performance indicators. These indicators are evaluated every three months (by term) to assess the achievement of each indicator. As per the work plan, discussions are held if performance according to an indicator in the second term is not at par with the desired level. A serious action is taken in the form of either additional activities or shifting the activity to other possibilities. The roadmap for achieving strategic objective of enhancing research and publications performance of the university is presented in Figure-2.

The plans were developed in 2009 and their full implementation is expected by the year 2020. It is

hoped that in 2015, the student intake will be doubled compared to year 2010. In order to meet the new demand, a new campus has been developed out of town in Tangerang city. The strategic objectives provide framework for accomplishing target with the support of every department and its staff members, as well as Board of Management. All the budgetary allocations and work plans are made in accordance with strategic objectives and monitored regularly in order to understand every problem faced during the implementation phase.

In 2014, UBiNus expects every faculty member to contribute at least one international paper and filing of 25 patents. In order to get 4-star ranking by QS Rating System (Martin, et al., 2014), it is suggested that the

number of Scopus-indexed publications should also increase proportionate to the strength of faculty members. It is highly expected that every faculty member will have published papers by 2018 (a paper per year) in Scopus-indexed journal. Moreover, the number of intellectual properties is also highly expected to rise up to 75 each year. As high-impact research at university-level is expected to be multidisciplinary, every study program at UBiNus focus on solving problems at national level. Due to such mechanisms, many research activities of UBiNus are funded by National Funding Programs through Indonesian Ministry of Education and Culture (<http://simlitabmas.dikti.go.id/>).

Figure-3 shows that University's central research theme is generated into research topics according to the competence of each Study Program and Research Interest Group (RIG) as per the university's research roadmap. Before applying for research grant, each research topic is evaluated through a peer-review process. There are two sources of grants available for researchers at UBiNus; the first source is UBiNus itself allocating 7.8 billion rupiahs per year, and the other is National Funding Program, which provides about 3.5 billion Indonesian rupiahs. Both funding programs rely on peer-reviewing process, and each research topic is aligned with UBiNus' Research Theme and the national problem solving needs. Mainly, the research is 'applied' in nature and is published in proceedings, journals and patent productions. The different parameters of UBiNus Research Theme are shown in Figure-4.

Publishing research results in a journal or patent production, also helps in enriching teaching/learning material (Figure-5). Such information materials are reviewed by Content Concentration Coordinator from each study program to ensure the quality of the content. This content enrichment process is directly controlled by the study program and monitored regularly by the Research Office. In the following section strategic planning, data collection on research and publication achievement are discussed in detail .

### 3. IMPLEMENTATION, RESULTS AND DISCUSSION

The implementation of strategic planning was not easy at the beginning (Anonim, 2013). Paradigm changes played an important role in ensuring that every resource supports the plan. Selecting role models as leaders of research interest group (RIG) also helped the enhancement of research activities, as well as increasing the number of publications. These RIGs are expected to enhance the multidisciplinary research among Study Programs. The research group's activities are upgraded to become a research program if, in due course, the research realizes its prescribed objectives.

Figure-6 shows that number of international publications increased over time, especially from 2011 to 2012 where the strategic plan was fully implemented. During the time, UBiNus also organized international seminar that encouraged all faculty members to submit their research proposals. A series

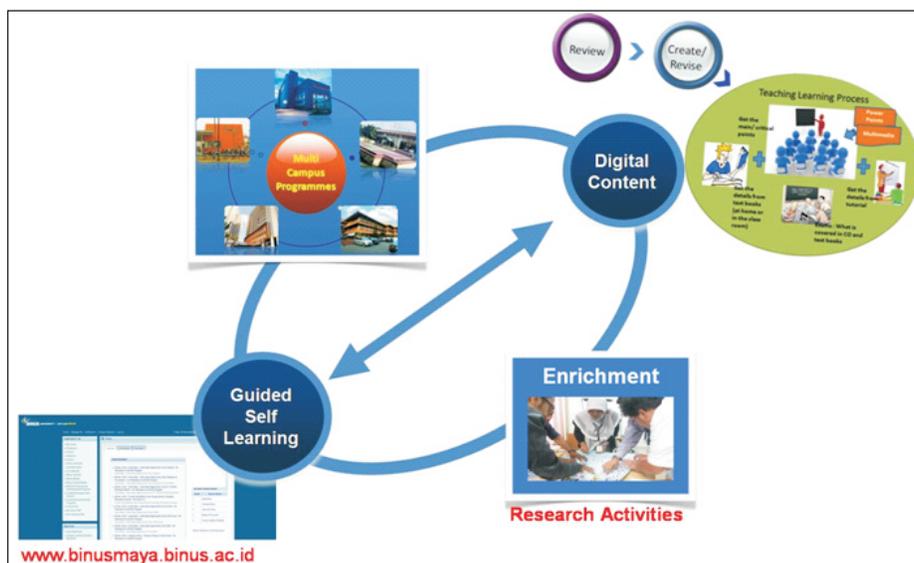


Figure-5: High-impact Research - a Source of Enriching Teaching/Learning Material

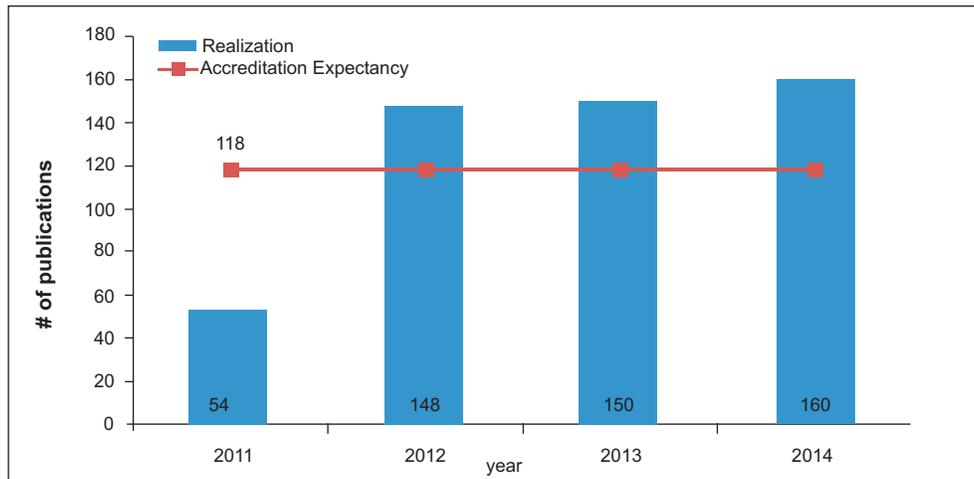


Figure-6: Number of International publications

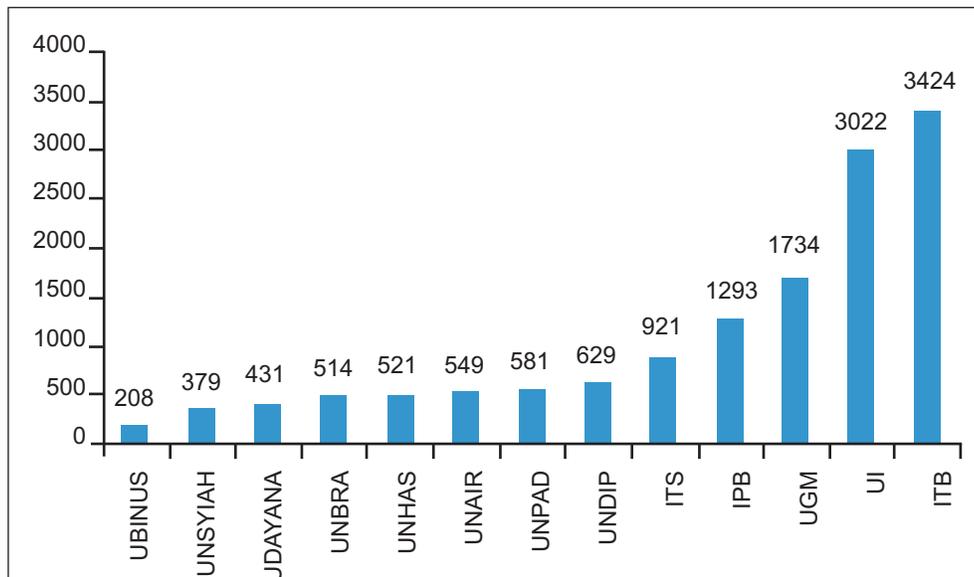


Figure-7: Number of Scopus-indexed publications of higher education institutions in Indonesia

Source: <http://www.scopus.com>

of research writing mentoring was also conducted by English Language Center in cooperation with senior researchers of the university. Each participant of such mentoring program is intensively supervised and awarded certificate when they submit their paper(s) in international journals or proceedings. The mentoring program continues to date. The chosen field of expertise varies according to the Study Program, and the number of participants.

The number of Scopus-indexed publications have been on increase, which will help the university to attain 14<sup>th</sup> place out of 3,151 higher education

institutions in Indonesia (Figure-7). At present, UBiNus holds first place among the private-sector universities in the country. In order to increase the number of Scopus-indexed publications, incentive initiative program that has been launched, which imparts training to the author(s) of research publication. The incentive under this program varies from a million to 5 million rupiahs, depending on the rank of the journal or proceedings.

The contributors of Scopus-indexed publications come from almost all Study Programs. Figure-8 shows that 43% comes from UBiNus Graduate Program

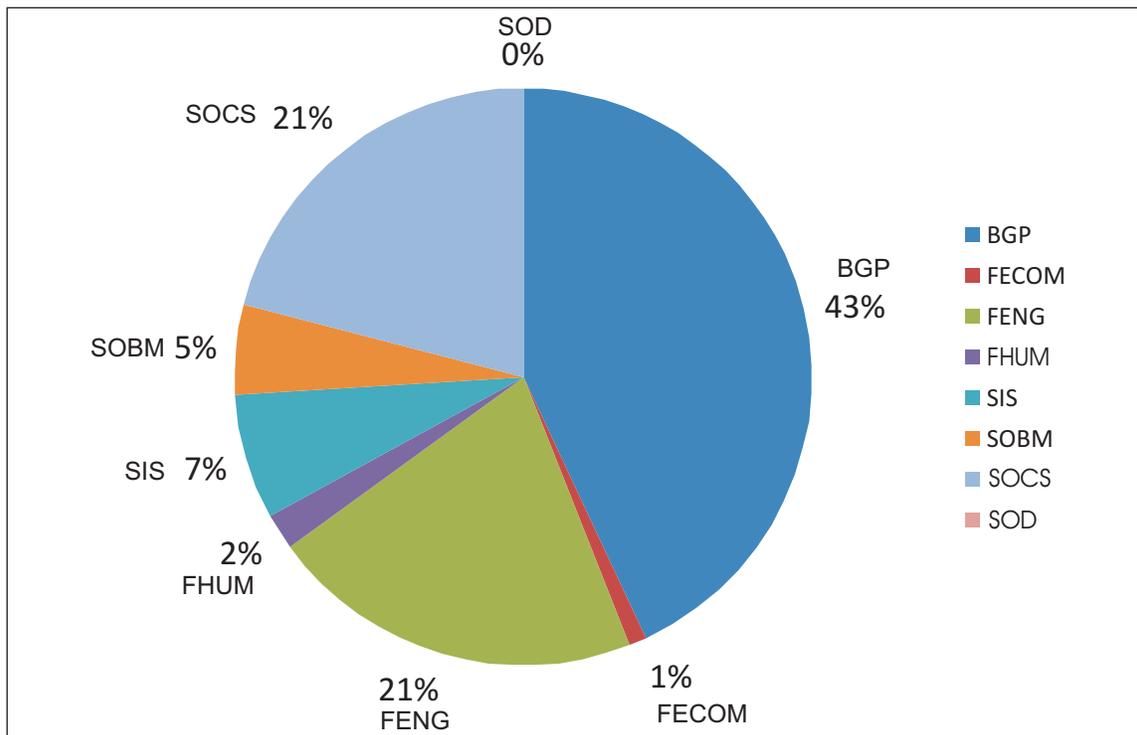


Figure-8: Contributions of Different Study Programs in Scopus-indexed Publications of UBiNus

(BGP), 21% from Faculty of Engineering (FENG), 21% from School of Computer Science (SOCS), 7% from School of Information Systems (SIS), 5% from School of Business Management (SOBM), 2% from Faculty of Humanities (FHUM), and 1% from Faculty of Economy and Communication (FECOM), and none from School of Design (SOD).

The number of registered patents by the end of 2013 was 36, and 1 patent has benefited the Indonesia Ministry of Law. Since the number of patents keeps on increasing, a strategic plan for technology transfer is needed and a technology transfer affairs is necessary. This matter will be pursued in the later part of 2014 by both Research Office and Legal Department of Bina Nusantara University.

There are several strategic issues discussed in the meeting of Board of Management in order to increase the number of Scopus-indexed publications. The first is the empowerment of research coordinators who are responsible for research quality in Study Program. The second is a crash program on Ph.D. recruitment which in reality is quite difficult to achieve since every Ph.D. in Indonesia is already working in other universities. Third is subscribing to Scopus as part of motivating factor in order to enable authors to find appropriate

reference material in their field of study. Fourth is organizing Scopus-indexed seminar within UBiNus and collaborating with Scopus-indexed publishers for publishing the seminar results in Scopus-indexed proceedings. Fifth, is recognizing the potential faculty members who are able to do extensive research and publications with more than two international publications per year. Sixth is providing significant research and publication funding so that every author can have the chance to get the research funds, as well as arrange for travel abroad for international seminars or conferences. Seventh is establishing more graduate programs so that UBiNus is able to produce bigger number of graduate students doing research. Nowadays, UBiNus has four Graduate Programs: Master Program in Management, Master Program in Information Technology, Master Program in Information Systems Management, and Doctorate Program in Research Management. Last strategy is establishing greater number of joint research projects with other institutions and increasing the number of RIGs. These strategic measures are now being implemented simultaneously and hopefully in 2018 the desired results will be achieved.

However, each resource is expected to meet different needs to achieve the desired objectives. Faculty

members are asked to identify most suitable research collaborators and publish more papers in high impact journal, as well as to secure more research grants. As for the Head of Department or School, they are asked to identify areas of focused research interest, including the next hot research topics, create a world-class department or school, and increase group level funding. As for Deans and Vice Rectors, they are asked to benchmark against peer institutions, define their strategic direction, establish world-class capability, and optimize allocation of the funds.

In order to further strengthen the university's research activity, a research center was established in 2014 to empower RIG in Bioinformatics: BiNus International Genome Research Center (BIOGEN). BIOGEN will have research partnership with organizations conducting biomedical research, such as Dharmais Hospital, Indonesia, and will also have partnership with BioRelm in University of Southern California, Affymetrix, Amazon, and Fujitsu.

Besides implementing these strategic plans conducive environment for research needs to be created, as well all faculty members are involved in research programs which results in higher number of Scopus Indexed publications. Faculty members need to be encouraged to search for avenues for more external research grants, increasing the number of multidisciplinary research programs, getting more offers for travelling abroad for research activities, developing awareness on intellectual property commercialization, and producing more research results for curriculum enrichment.

#### 4. CONCLUSIONS

Being one of the largest private-sector universities in Indonesia, one of UBiNus' goals is improving the quality of its research and publications. Several strategies were proposed and implemented successfully in the past three years. As a result, UBiNus made many achievements and received honors from the Government of Indonesia through the National Higher Education Department, the Ministry of Education and Culture, Indonesia. The public acceptance also shows that UBiNus now stands first among the private-sector universities of the country with most number of Scopus-indexed publications. Hopefully with this strategic planning, UBiNus can set precedents for other universities in developing countries for enhancing their capacities in research and publications.

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