Strategy in Improving Research Productivity of the Lecturers

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Abstract—**This study aims to express comprehensively about motivation in lecturers' research, institutional policies in supporting the research process, and lecturers' research productivity in teacher training and education science Mataram. This research is a qualitative research by using the intrinsic case study approach. The results of this study showed that 1) the motivation of lecturers in conducting research is influenced. a) Intrinsic factors: financial, pleasure in conducting research, scientific responsibility, and desire to fulfill rank, achievement motivation, language and ability to research, b) extrinsic factors, including: institutional support, competition, research culture, and campus policy. 2) Policy in increasing the productivity of lecturers' research results includes: a) the determination of the research mission, b) providing research support facilities, c) optimizing the functions of the center of research and community service to manage research activities, and d) encouraging the publication of lecturers' research through internal journals. 3) There is an increase in the quantity and quality of lecturers' research each year which is encouraged by the availability of a forum for lecturers to publish their research in internal journals. Based on the findings of this study, it must be recommended in order to be a continuous and comprehensive effort to improve the productivity of the results of lecturers 'research, especially in publishing the results of the lecturers' research into national and international journals.**

Keywords—strategy; research productivity; lecturers

I. INTRODUCTION

Article 12 paragraph 2 of Law Number 12 of 2012 concerning Higher Education mandates that "Lecturers as scientists have the task of developing a branch of Science and / or Technology through reasoning and scientific research and disseminating it". Thus, it can be understood that lecturers are not only required to actively carry out the learning process, transfer knowledge, educate prospective skilled workers, or as a source of learning for students' intellectual progress. More than that, lecturers are required to productively produce knowledge and develop innovations and technology in order to provide solutions and solve social problems through research.

The results of the study show that the productivity of lecturer research is an important indicator of the success of lecturers which influences promotions, rank levels, honorariums, and lecturer benefits. However, in general, various studies establish three types of measures for research productivity, namely: (a) qualitative rank of related journals, (b) quantitative measures of total and average research productivity of faculty, and (c) quantitative measures of total and average research productivity according to where faculty earned their doctoral degrees [1].

Compared to several other ASEAN countries such as Malaysia, Singapore and Thailand, research productivity in Indonesia is still lagging behind, both in quantity and quality. This feature can be seen in table 1:

TABLE I. INTERNATIONAL PUBLICATIONS OF INDONESIA AND SEVERAL SOUTHEAST ASIAN COUNTRIES 2016-2017

Country	2016		2017	
	Publication	*Quote*	*Publication*	*Quote*
Indonesia	12185	11765	19098	18683
Malaysia	29739	28585	31043	29606
Singapore	20985	19167	20803	19012
Thailand	14608	13678	15666	14664

Data Source: International Publications of Indonesia and several Southeast Asian countries 2013-2017

Table 1 above indicates the need for real efforts by the government and especially the management of higher education institutions in Indonesia to overcome various obstacles in order to encourage an increase in researchers' productivity. Various research results indicate that there are various factors that influence the productivity of lecturers' research, including: lack of rewards [2], weak financial support, low research ability, excessive teaching burden [3], the existence of negative attitudes towards research, unavailability of the latest references both books and journals, and universities that do not yet have accredited journals [4] and unavailability of adequate facilities and infrastructures (internet bandwidth) [5].

The literature review conducted by Mantikayan and Abdulgani found that in general lecturer research productivity was significantly influenced by four factors [6], namely: a) individual factors, including: self-efficacy, affiliation, motivation, commitment, orientation, skills researching, achievement motivation, community contribution, sense of responsibility, scientific pursuit, autonomy and flexibility, satisfying interest and curiosity), b) institutional factors (lack of training institutions, staff support, technical support and guidance, resources, awards, workload, research culture,

research emphasis, tenure and promotion, financial awards, performance standards, peer and social recognition), c) leadership factors include: appreciation, orientation and priority, and d) ascriptive factors, which refer to gender, age, intelligence, and personality.

At the level of higher education institutions, relevant policies are needed to eliminate the obstacles that hinder the productivity of lecturers to research. Metcalfe in Smart classifies the types of research policies in their definition that research policy is "*a set of policies at various levels that concern the mission, support, management, and translation of research* [7]. Based on the description above, this study aims to reveal comprehensively about strategies in increasing the motivation of lecturers' research, institutional policies in supporting research productivity, and publication strategies of the results of lecturers' research at teacher institute and education science.

II. METHODS

This research is qualitative research with an intrinsic case study approach which is intended to study intensively about the background of the problem of the situation and position of an event that is currently happening, as well as the interaction of certain social unit environments that are given.

Creswell argues that qualitative research is a process of scientific research to understand human problems in a social context by creating a comprehensive and complex picture presented, reporting detailed views of information sources, and carrying out in natural settings without any intervention from the researcher. The stages or procedures in a qualitative approach include steps according to Creswell as follows [8]: 1). The Assumptions of Qualitative Designs, 2). The Type of Design, 3). The Researcher's Role, 4). The data Collection Procedures, 5). Data Recording Procedures, 6). Data Analysis Procedures, 7). Verification Steps, 8). The Qualitative Narrative.

The sample interviewed was chosen by "purposive" relating to the research objectives including: Rector, Vice of Rector, Dean, Head of LPPM and Lecturers at IKIP Mataram. Bogdan and Biklen state that selected informants are asked to appoint other people, and so can be called "snowball sampling" carried out serially or sequentially. To obtain certain information sampling can be done until the level of completeness redundancy or saturation, meaning that by using further information it may be said that no more new information is obtained [9].

Data analysis procedures in qualitative research are carried out simultaneously with the process of data collection, data interpretation and other narrative writing. The process of data analysis is done based on the process of data reduction and interpretation, changing the data from the reduction in the form of a matrix, identification of coding procedures is used in reducing information into existing themes or categories. Verification determines the accuracy of the report, which discusses the possibility of generalizing the report, it is important to highlight the validity of the data. The final procedure of qualitative research is qualitative narrative,

namely narrative that arises from analyzing data that appears in the form of a text or image.

III. RESULT AND DISCUSSION

A. Motivation of Lecturers' Research

To find out the motives in conducting research, the respondents were asked about their perceptions of various aspects of motivation both intrinsic and extrinsic which motivated them to conduct research. Based on the results of respondents' answers, the themes that emerge include: a) intrinsic factors: financial, pleasure in conducting research, scientific responsibility, and the desire to fulfill rank levels, achievement motivation, language, and research ability, b) extrinsic factors, include: institutional support, competition, cultural research, campus policy.

B. Strategies and Policies at Teacher Training and Education Science Mataram to Increase Productivity in Researching Lecturers

The productivity of lecturer research is not only influenced by individual factors. Government policy especially campus policy plays a very important role in increasing the productivity of lecturers' research. At the institutional level, research policies are mostly related to governance, institutional support for example funding policies, research collaboration, research rules and ethics, intellectual property management (patents, licenses, copyrights), and can also be related to research support that occurs outside college environment. In this study respondents were asked about campus policies in an effort to increase productivity in researching lecturers including: a) mission policy, b) support policy, c) management policy, and d) the policy of translating research results in detail which can be seen in table 3 below:

C. Publication of Lecturers' Research Results

Research productivity is not only measured based on many studies produced and published by lecturers in a certain period of time in journals on a regional, national and international scale, but also from the number of journals managed by the higher education institutions. The following are publication data of the results of lecturer research and journals managed in the teacher training and education science Mataram.

Summing up from the opinions of experts, Ross defines research as "*the search for knowledge through systematic enquiry, a harnessing of curiosity, and a culture*" [10]; the search for knowledge through systematic inquiry, utilizing curiosity, and cultural definitions — this implies that research is a form of critical thinking driven by motivation from within the researcher himself and contains value-filled agendas. In other words, research is an activity motivated by curiosity to gain new insights in solving problems, or to understand the world around us.

The above description illustrates that research is essentially an activity that is driven by curiosity research to obtain new insights or find solutions to a problem. However, according to Shamoo and Resnik explain: *Scientific investigators work in different ways to attain new knowledge and have many*

different motives for conducting research. Most researchers have a deep desire to understand the world, to make new discoveries, and to pursue truth, to the best of their ability [11]. *Others want to make an important contribution to the world by improving the human condition or protecting the natural environment. Researchers may also have goals that are less altruistic or noble. Some seek fame, glory, and prestige, and almost all researchers also have strong economic motivations. For most researchers, science is a career and a way to make a living* [11].

The opinion above explains that whatever someone does, their motives determine the types of tasks and commitments they have in energy, dictating the way they work, think, solve problems, and manage change. A person's needs, motives, and style work tells us how much energy people have to do various types of work and will influence their behavior, attitudes, and feelings.

The results of other studies conducted by Adjei showed that 30.3% of lecturers conducted research on the background of the desire to develop their knowledge, job promotion, and for reasons of monetary rewards [12]. The results of this study also found that this economic background was the reason for the majority of lecturers to study, followed later because of the desire to increase academic positions. This study also suggests that in order to be a qualified researcher who also produces quality research, lecturers are expected not to do a research only for economic reasons, but also to leave intrinsic motivation factors, namely to develop knowledge and find solutions to various problems. Another study conducted by Horodnic and Zait found that both intrinsic motivation had a positive effect on the productivity of lecturers 'research [13]. On the contrary, extrinsic motivation negatively affected the productivity of lecturers' research.

The results of this study indicate that the motivation of lecturers in conducting in teacher training and education science Mataram is motivated by internal factors including: 1) obligations as a lecturer, 2) facilities for functional promotion, 3) lecturers' scientific development, and external factors which include: 1) work climate and 2) campus internal and external policies, and 3) improving the welfare of lecturers. Based on the theories and research results that have been stated previously to become qualified researchers who also produce quality research, lecturers should not do the research only because of external factors, including financial reasons, but also internal factors such as because of the awareness that research is the duty and responsibility of the lecturer and the desire to develop knowledge and solve community problems, because these internal factors are positively correlated with the productivity of the research of the lecturers.

The vision and research mission of a tertiary institution expresses the aspirations of the tertiary institution in relation to its research activities and products at the international, national and regional levels. OECD indicates that higher education research missions lead more to the orientation of the availability of documents relating to university accreditation [14]. Apart from this statement, these findings indicate that the policies listed in the documents are related to the research mission at the teacher training and education science Mataram

which shows a strong desire from the institution as the leading tertiary institution to conduct research to develop science, technology, and art in the field of education such as international, national and regional levels.

Metcalfe in John C. Smart notes that institutional support, especially funding support, has a significant influence on the quality and quantity of research [7]. The results of this study indicate that in addition to encouraging lecturers to access research grants from outside the campus such as grants from Dikti or other grants, the teacher training and education science Mataram also provides funding for internal research in each semester. The purpose of this internal research fund is so that each lecturer can conduct research even though he has not received a grant from the Directorate General of Higher Education or any other grant.

When a college institution does not meet their needs, this may affect the motivation to research them. UNESCO as quoted by Okendo emphasized that "the lack of collaboration between research resources, facilities, and researchers themselves causes the ineffectiveness of the research process in higher education, because both competition and cooperation are not separate from the research agenda in a higher education institution [15]. While the results of the study by Bland et al. found that research productivity was formed by the interaction of three large compositions, which included progressive interactions of individual and institutional attributes, which were complemented by competent leadership that would later produce efficient performance of individuals and institutions.

Management policies include college policies regarding research codes of ethics, conflicts of interest, management of intellectual property rights, management of research activities, ownership and promotion, and evaluation of research. The results of this study indicate that the teacher training and education science Mataram has been equipped with policies regarding research management as stated in the policy documents including Research Guidelines, Research Work of Operational Standards, Research Code of Ethics, and Copyright Management.

Various policies issued by teacher training and education science Mataram related to the management of research on campus can be seen as an effort to create a strong foundation which can provide an overview of how teacher training and education science Mataram builds research processes, including the rights and obligations of lecturers as researchers, research processes and ethics, rights management wealth and evaluation of research. With the existence of these policies research management in teacher training and education science Mataram can run more regularly where each individual can understand their functions and duties, so that conflicts of interest that often occur especially in submitting research grants can be minimized.

Research activities in higher education are essentially intended to produce science and technology through research that pays attention to and applies the value of humanities to benefit the nation's progress, as well as the progress of civilization and the welfare of mankind. Thus, the results of higher education should be translated so that they can be implemented to solve various problems that occur in the

community. Thus, the implementation policy in the research which is defined Metcalfe in Smart as follows "*the movement of ideas from the academic sector to society* [7]; the movement of ideas from the academic sector to society, is a series of policies that involve the translation of research from the academy into the larger social reality. This policy is also referred to as the policy "technology transfer", or "knowledge transfer," intended so that the results of higher education research are published, published, disseminated in the midst of the community so that they can contribute creatively to the resolution of social problems. Thus, higher education does not become an "ivory tower", because its activities are far from the surrounding of social reality.

The results of this study found that there were no clear policies regarding the implementation of research by lecturers at teacher training and education science Mataram. Although they already have journal management guidelines, and center of research and community service provides a place to publish scientific works that have been completed by lecturers who are scattered in each of the OJS-based faculties, this is still done which is not based on existing policies, but rather the desire to fulfill completeness in the academic level of the lecturer. Similarly, there is dissemination of research results. With the absence of a policy for disseminating the results of lecturers 'research, it will cause lecturers' research results to be seldom disseminated through seminars, and workshops. The results of Kahsay's research found a link between the results of research in higher education and the improvement of the socio-economic community, so that there needs to be strengthening through related policies in the implementation of research results to "technology transfer" or "knowledge transfer" from the academic domain to a larger social domain [16].

IV. CONCLUSION

Based on the findings of this study, it can be concluded that the motivation of lecturers in conducting research can be influenced. There are several policies of teacher training and education science Mataram in increasing the productivity of the results of lecturers' research, such as: 1) mission determination in line with the implementation carried out by lecturers of teacher training and education science Mataram , 2) providing financial support, research facilities and facilities and increasing capacity to research lecturers through: conducting Focus Group routines Discussion (FGD) workshops, seminars, and research workshops on a regular basis; formed a team of internal and external proposal reviewers to determine the quality of research proposals, 3) setting guidelines for the Implementation of Research and Service to the Community, Research Ethics Lecturers of teacher training and education science Mataram; and Operational Standards of the Internal Research Work of teacher training and education science Mataram. The quality of the journal at teacher training and education science Mataram is based on Online Journal System so that lecturers are very easy to find and view articles on the internet; 4) publishing journal articles are free of charge by journalists at Mataram teacher training and education science, and; 5) Teacher training and education science Mataram has an internal team in managing Intellectual Property Rights (IPR). There is an increase in the quantity and quality of lecturers'

research every year which is driven by the availability of a place for lecturers to publish their research in internal journals.

Based on the findings of this study, researcher recommends:

- For teacher training and education science Mataram institutions, there needs to be a continuous and comprehensive effort to increase the productivity of the results of lecturers' research, especially in publishing the research results of lecturers to national and international journals and can be applied to the life and progress of education, especially in NTB.

- For universities in the Kopertis VIII region. The results of this study can be used as a reference in developing and increasing the productivity of lecturers in conducting research and obtaining grants from the Ministry of Research and Technology as well as the sources of funds in the regions and at the center.

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