



Research and Community Service Performance during the COVID-19 Pandemic and Their Performance Management Response (Study in a Public University)

Mohammad Nuh^{a*}

^aDepartment of Public Administration, Universitas Brawijaya, Malang, Indonesia

ARTICLE INFORMATION

Article history:

Data submission : 24 October 2023

1st revision: 31 October 2024

Accepted: 21 February 2024

Available online: 10 June 2024

Keywords: Covid-19; Performance Management; Research; and Community Service

ABSTRACT

The Covid-19 pandemic influenced various aspects of lives, such as in health, economy, and education sector. The conditions of these sectors attracted academics and practitioners, who in turn conducted research during the pandemic period. One interesting and rarely discussed aspect is the impact of the Covid-19 pandemic on the process and performance of university research and community service. This study aimed to evaluate the impact of the Covid-19 pandemic on the process and performance of research and community service. This research was conducted at Brawijaya University using pragmatic evaluation methods and a survey research approach. The unit of analysis was institutions/units related to research and community service activities, for instance, BPPM, Study Centre, Research Groups, and Laboratories. The researcher distributed questionnaire through google form. Although only 52 people responded to the questionnaire, they represented each institution as the unit of analysis in this research. The research findings showed most of the respondents conveyed that Covid-19 pandemic had impact on the process and performance of the research and community services. As suggestion, research and community service management are required to make improvement and adjustment to ensure continuous process and performance.

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1. Introduction

The Corona Virus Diseases-19 (Covid-19) pandemic is a virus that has grown globally. Covid-19 was first discovered in Wuhan Province, China, at the end of 2019 and spread almost all over the world. Until the beginning of November, almost 46 million cases of Covid-19 sufferers were recorded worldwide, and 1.2 million died. Every week, the increase in cases was relatively high, with more than 3.3 million people.

The first case of Covid-19 sufferers in Indonesia was found in March 2020. The increase was relatively rapid and reached 516,753 positive confirmed cases and 16,352 deaths, or around 3.2% of confirmed positive cases. The rise of national positive confirmed cases showed that the daily increase was still high in one month. Although DKI Jakarta Province still dominated the contribution of additional cases, its distribution could be seen in almost all provinces in Indonesia (Satuan Tugas Penanganan COVID-19, 2020).

WHO Region	New cases in last 7 days (%)	Change in new cases in last 7 days*	Cumulative cases (%)	New deaths in last 7 days (%)	Change in new deaths in last 7 days*	Cumulative deaths (%)
Europe	1 752 918 (52%)	34%	11 088 612 (24%)	17 396 (38%)	46%	385 402 (24%)
American	399 652 (30%)	13%	20 477 535 (45%)	17 267 (38%)	2%	638 353 (54%)
South-East Asia	381 422 (11%)	-14%	9 251 788 (20%)	4 657 (10%)	-15%	144 354 (12%)
Eastern Mediterranean	181 837 (5%)	14%	3 092 037 (7%)	4 669 (10%)	16%	78 599 (7%)
Africa	32 943 (1%)	3%	1 324 258 (3%)	640 (1%)	-23%	29 785 (2%)
Western Pacific	26 473 (1%)	-3%	733 828 (2%)	398 (1%)	-5%	15 585 (1%)
Global	3 355 205 (100%)	14%	45 968 799 (100%)	45 051 (100%)	12%	1 332 911 (100%)

Figure 1 Global Increase in COVID-19 Cases
Source: WHO (2020)

The Indonesian government has taken preventive measures to appeal the public to use masks, maintain distance, and wash hands. The government has also issued regulations and implemented programs to handle Covid-19, including imposing Large-Scale Social Restrictions (PSBB) in several areas. However, the results of these efforts have not optimally reduced the

* Mohammad Nuh. e-mail: nuh_m@ub.ac.id

number of cases of additional confirmed positive patients since the increase in positive confirmed cases per day was still around 3500-4000 people.

The Covid-19 pandemic has become a deadly disease for two years, and there is no sign of an end soon because no single vaccine in the world that works as an antidote has been found. Various vaccine trials have been carried out, but no country has publicly administered the vaccine that was found. This condition made the prevention efforts only relied on community compliance to health protocols. The disobedience and carelessness of the public have made this virus not well controlled so that the number of Covid-19 sufferers was still quite high. Such conditions have increasingly become problems for people who have refrained from returning to normal activities.

Globally, the spread of Covid-19 has caused various impacts, including Indonesia. Almost all aspects of human life have changed due to Covid-19. In the economic sector, for example, the world economy contracted almost 95% or experienced negative growth. For Indonesia, the Minister of Finance, Sri Mulyani, identified three economic impacts of Covid-19, namely falling household consumption or purchasing power, weakening investment, and halted exports to several countries (Situmorang, 2020).

The Indonesian government has taken preventive measures to urge the public to wear masks, maintain social distance, and wash their hands. The government has also issued regulations and implemented Covid-19 handling programs, including imposing Large-Scale Social Restrictions (PSBB) in every region in Indonesia as stipulated in Government Regulation No. 21 of 2020 concerning PSBB in the context of accelerating the handling of coronavirus disease (Covid-19). It means that school and work activities, religious activities, activities in public facilities, social and cultural activities, and public transportation operations were restricted (Kemenkes RI, 2020). However, these efforts have not been able to reduce the number of additional confirmed positive cases in Indonesia. Nevertheless, the addition of Covid-19 cases every day has been parallel to the increase in the recovery rate of Covid-19 patients.

The spread of Covid-19 has caused various impacts in the world, including Indonesia. Almost all human life aspects have changed due to Covid-19. McKibbin & Fernando (2020) stated that the evolution of the corona virus and its impact on the economy is very difficult to predict, making it difficult for the authorities to formulate economic policies in dealing with the impact of the Covid-19 pandemic. In the economic sector, for example, the world economy contracted almost 95% or experienced negative growth. For Indonesia, the Minister of Finance, Sri Mulyani, identified three economic impacts of Covid-19, namely falling household consumption or purchasing power, weakening investment, and halted exports to several countries (liputan6.com, 2020).

Apart from the economic sector, the Covid-19 pandemic has also affected the education sector.

According to Abidah et al. (2020) the spread of Covid-19 is starting to impact the education sector since the educational institutions are expected not to carry out activities as usual. It is expected as one of the efforts to reduce the spread of the virus. In the field of education, Covid-19 has affected the teaching and learning processed in primary, secondary, and tertiary schools. The Minister of Education and Culture mentioned that the Covid-19 condition did not allow teaching and learning activities to run normally. In addition, hundreds of thousands of schools were closed, around 68 million students were studying at home, and teachers were teaching remotely (Kemdikbud, 2020).

For higher education, Covid-19 has affected the implementation of the Tri Dharma, namely teaching and learning process, research, and community service. Therefore, it is important to conduct research on the performance of research and community service during the covid-19 pandemic and to identify the management of research performance and community service in the middle of the Covid-19 Pandemic conditions carried out by universities. The questions in this research are: How is the impact of Covid-19 on the performance of research and community service implementation in universities? and How is the management of research and community service performance in universities during the Covid-19 pandemic. The purpose of this study, in addition to analyzing the impact of Covid-19 on the performance of research and community service process, is also intended to understand what Universitas Brawijaya has done as the unit of analysis for this research, both from institution and its lecturers in managing the implementation of research and community service activities so that research performance and community service can continue to run as expected.

2. Theory

In order to analyze the effect or impact of Covid-19 on the achievement of research and community service performance, a relevant theoretical framework is needed. Two main theories used in this study are the theory of performance measurement or performance appraisal (Amstrong, 2006) and performance management since those two theories are related to each other. Armstrong has mentioned that performance appraisal at certain times is equal with performance management, but they are significantly different. Performance appraisal is a formal assessment and individual rating of the manager's assessment. However, performance management is more on a comprehensive process and mentoring, including support from managers to achieve expectations and focus on the future.

Before discussing these two concepts comprehensively, it is necessary to first describe the meaning of performance. Performance is an idea that has received considerable attention in the development and debate of public management in the current century

in various parts of the world (O'Tole & Meier, 2011). Performance describes a condition achieved by the organization or individual member of the organization in the form of inputs, outputs, and the results of the activities they carry out.

Performance indicators often become a reference to the extent to which organizational performance can be manifested. O'Tole & Meier mentioned that performance is achieved from programs and public organizations related to the outputs and outcomes produced. The dimensions may include efficiency, effectiveness, fairness, and public satisfaction (Boyne et al., 2006). Meanwhile, Poister (2003) stated that the dimensions of performance include effectiveness, efficiency, productivity, service quality, customer satisfaction, and cost effectiveness. Performance is defined as work performance, work presentation, and work achievement, or performance also means the level of success in carrying out tasks and the ability to achieve the programmed goals (Gibson, Ivacevich, and Donnerlly, 1997). Performance is a record of the function of a job or activity during a certain period of time (Bermadin and Russel, 1993). Bates and Holton (1995) in Armstrong (2002) emphasized that performance consists of multi-dimensional seen from various factors, and it is important to know the goal to see the results of its performance or behavior.

Performance describes a condition achieved by the organization or individual members of the organization in the form of inputs, outputs, and the results of the activities they perform. According to Mahmudi (2005: 159) performance indicators are suggestions or means to measure the results of an activity or process, and not the results or the end goals. The role of performance indicators for public sector organizations is to provide signs for managers and external parties to assess the organizational performance. Some requirements for good performance indicators according to Mahmudi (2005: 161) are consistent, comparable, clear, controllable, contingent, comprehensive, focused, relevant, and realistic.

Performance indicators according to McDonald & Lawton in Atik and Ratminto (2005: 174) mentioned that performance can be measured from output-oriented measures throughout (a measure that is oriented to results not process), efficiency (a condition showing the achievement of the best comparison between inputs and outputs in a public service delivery), and effectiveness (the achievement of the goals that have been set in the form of targets, long-term goals, and organizational vision). Meanwhile, according to Selim and Woodward in Atik and Ratminto (2005:174) performance can be measured from several indicators including workload/demand, economy, efficiency, effectiveness, and equity. Thus, it can be said that performance can be measured by workload/demand, economy, efficiency, effectiveness and fairness.

Performance indicators often become a reference to the extent to which organizational performance can be fulfilled. O'Tole & Meier mentioned that performance is

achieved from programs and public organizations related to the outputs and outcomes produced. The dimensions may include efficiency, effectiveness, fairness, and public satisfaction (Boyne et al., 2006). Meanwhile, Poister (2003) stated that the dimensions of performance include effectiveness, efficiency, productivity, service quality, customer satisfaction, and cost effectiveness.

The formulation of performance indicators pays attention to inputs, activities, outputs, outcomes, and goals. Dooren, Bouckaert, and Halligan (2015:20) revealed that performance management can cover the entire series from input to output. These five factors are a unit that cannot work alone.

In order to understand the performance of the public sector, the two important interrelated terms are performance measurement and performance management. Performance measurement is essentially an activity to obtain information about the performance, and performance management is an activity related to efforts to optimize the achievement of its performance. According to Goh (2012), that the two terms, namely performance management and performance measurement, are often understood as synonymous, but in fact they are different. Performance management is a management tool to improve organizational performance. According to Armstrong (2006), performance management is designed to ensure what was done is based on values and related to organizational goals. Performance management is a flexible process consisting of planning, acting, monitoring, and reviewing stages. Planning is essentially a stage of determining the goals and competencies needed to achieve the agreed organizational performance. Acting is an activity carried out to achieve the goals and plans that have been agreed. Monitoring is needed to supervise the progress of achieving the goals that have been achieved during the implementation. Reviewing is an activity of assessing the progress and achievement of the overall planned actions.

The following picture is a performance management cycle formulated by Armstrong (2006) as the basis for a theoretical analysis of the condition of research and community service performance management at Universitas Brawijaya. Fundamentally, planning and act are the process of agreeing on what performance and indicators will be achieved by the organization and preparing the implementation of the agreed plan. Monitor and review are stages to ensure the achievement in the process or the end of the activities carried out. Essentially, the last two stages are the performance measurement process.

Performance measurement is an important and main tool of performance management. Performance measurement systems come in all shapes and sizes, from detailed indicator monitoring of a production process or operationalizing service delivery of a unit of an institution or to measure the success of a country or

a nation. According to Poister (2003), some performance measurement systems focus on the efficiency and productivity of work units, and others are designed to monitor the outcomes of the program. Meanwhile, Pidd (2012) stated that most writers of measuring the performance of public institutions use indicators or measures of three "Es", namely Economy, Efficiency, and Effectiveness. The three performance indicators are linked to the input-output transformation model in Figure 1 below.

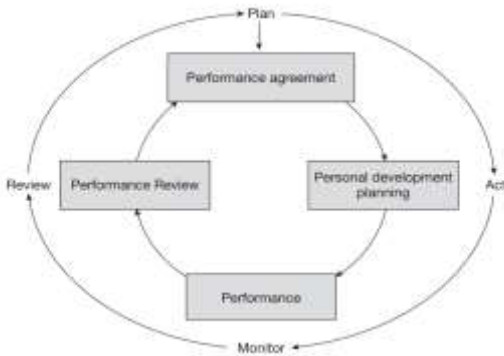


Figure 2 Performance Management Cycle
Source: Armstrong (2006)

Economic indicators are related to inputs, and also, economic indicators focus on costs and are relatively easy to measure. According to Bovaird & Löffler (2004), economic indicators mean that the required resources of quality results are at minimal costs. Meanwhile, efficiency indicators relate to inputs, activities, and outputs that describe the amount of output produced from each unit. In line with that definition, Christensen & Læg Reid (2013) stated that the concept of efficiency refers to the relative inputs required to achieve desired output or outcome. Efficiency means producing output at the minimum possible cost of the input. According to Pollitt & Bouckaert (2000), efficiency is a matter of optimizing the input/output ratio. Meanwhile, effectiveness indicators are related to service quality and outcomes. Indicators of effectiveness emphasize the measurement of how well the program achieves the stated objectives. In other words, effectiveness is a statement of the achievement level of outcomes produced by an organization or a previously formulated program.

Several theoretical models can be used as references to analyze the performance of research and community service. However, the model used in this study is from Pidd (2012) entitled a simple input-output transformation theory. The concept of the transformation process is intended to capture the role of public agents or public programs. This theory tried to explain various activities of public agencies or public programs that are held. These various activities become

the subject of performance measurement that reflects the achievement of their effectiveness and efficiency.

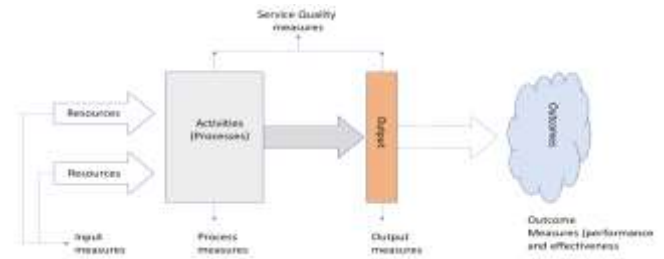


Figure 3 Four Types of Performance Management
Source: Pidd (2012)

According to Figure 1, Pidd (2012) describes four types of performance measurement to answer the questions of How much did we do? How well did we do it? Are people better off as a result of what we do? The four types of performance measurement are process measurement, output measurement, service quality measurement, and outcome measurement. Process measurement and service quality measurement are used to answer the question of how well did we do? From the above model, process performance is influenced or determined by the resources owned or supported by the implementation process. Meanwhile, output measurement is to answer the question of how much did we do? Meanwhile, outcome measurement is to answer the question of are people better off as a result of what we do?

3. Research Method

This research was conducted at the end of 2020 using a pragmatic evaluation approach. Numerous literatures stated that the pragmatic evaluation method is intended to evaluate the quality of a process, the benefits, or results of the activities carried out and the use of the system. This approach can use a variety of research methods, including combining the quantitative and qualitative research. According to Johnstone et al., a pragmatic evaluation involves conducting research in 'real world' scenarios where decisions need to be made on how to best conduct the evaluation with the limited amount of time and resources the researchers may have (Johnstone et al., 2017).

Evaluation is a process of collecting information related to an activity, including research activities and community service, through the two research methods. The quantitative and qualitative data obtained were then analyzed according to the specified criteria. According to Evert Vedung, evaluation is a careful assessment of the merit, worth, and value of content, administration, output, effects of ongoing or finished government intervention, which is intended to play a role in future, practical action situation (Peters & Pierre, 2006).

In order to obtain data to assess the process of conducting research and community service, this research used a questionnaire as the instrument, which is

widely used in quantitative research. In addition, this research also used secondary data in the form of report documents from institutions, laws and regulations, and several other documents. Questionnaires were distributed to the research objects, namely the heads of the Research Center, the heads of the Institute of Research and Community Service, and the heads of the laboratory at Universitas Brawijaya. Due to the Covid-19 pandemic, questionnaires were distributed via the internet and social media. Respondents filled out the questionnaire via google form, and only 52 respondents filled out the questionnaire. The data collected were then analyzed using descriptive statistics since, in general, it was impossible to test through further statistics. The questionnaire was formulated using a Likert Scale containing five answer options (1 = strongly disagree; 2 = disagree; 3 = doubtful; 4 = agree; 5 = strongly agree).

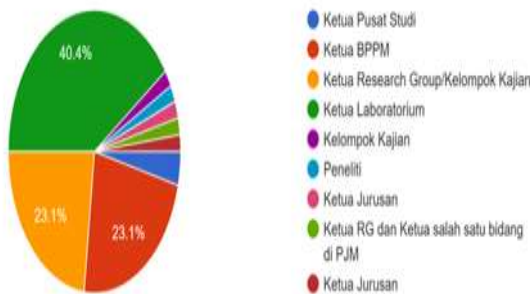


Figure 4 Research Respondent Profile Diagram
Source: Analysis Results (2021)

Figure 3 shows the profiles of respondents in this study. Most of the respondents were the heads of Laboratory followed by the heads of the Institute of the Research and Community Service and the heads of Research Center. The other responses were few in number.

4. Results

4.1 Results and data Analysis

Based on the data collected through the questionnaire, information obtained was about the process and output of research activities and community service carried out by respondents. Research and community service performance data during the Covid-19 pandemic and performance management of research and service based on respondents' perceptions of the conditions that they feel or experience are presented as follows:

- Performance of Research and Community Service Implementation during the Covid-19 Pandemic

During the Covid-19 pandemic, changes and adjustments have been made related to the implementation of research and community service activities. In general, respondents expressed that there was a change in the management of research activities and community service. Furthermore, respondents mentioned that the theme or topic of research and community service could be adjusted to the conditions of Covid-19, regarding the handling of Covid-19 and its impact. According to the advice from the central government, research activities should be focused on studying the handling of Covid-19. The graph below shows the respondents' attitude towards the condition of research and community service, namely about changes in themes, funding, and the mechanism for implementing research and community service.

Most respondents mentioned that the theme of research and community service was adjusted to the conditions of the COVID-19 pandemic. Although some disagreed with refocusing the use of research funds for themes related to Covid-19, a few expressed their opinion that there was a refocusing. Regarding the mechanism for conducting research and community service, most respondents agreed that there were adjustments during the pandemic that social sciences done in the community could be completed through online mechanisms or using other social media.

Respondents also assessed the mechanism for carrying out the research that there was an adjustment to the Covid-19 condition. The mechanism is related to research data collection and community service implementation. This change in mechanism was surely related to the central government's recommendation for State Civil Apparatus (ASN) to carry out tasks from home. A Circular Letter from the Minister of State Apparatus Empowerment and Bureaucratic Reform Number 57 Year 2020 confirmed that in the context of preventing the spread of Covid-19 in Government Agencies, there was an extension of the period of carrying out official duties at home (Work from Home). The State Civil Service Agency also issued a Circular Letter No. 11 Year 2020 concerning Guidelines for Imposing Disciplinary Sentences for State Civil Apparatus Conducting Activities Outside the Region and/or Homecoming Activities during Public Health Emergency Periods. Through a Circular Letter Number 4523 Year 2020, the Rector of Universitas Brawijaya also followed up on the central government's instructions to carry out the duties of some of the employees from home. These conditions then affected the mechanism for implementing research activities and community service. In addition, the Rector of Universitas Brawijaya also issued Rector's Regulation No. 35 Year 2020 concerning the Implementation of Kampus Tangguh, one of which is to regulate the mechanisms of academic administration. Some of

these regulations made the implementation of research and community service necessary to change or adjust the mechanism.

During the Covid-19 pandemic, most respondents felt difficult in collecting data and implementing community service. Of the 52 respondents, 34.6% agreed and 30.8% strongly agreed that there were difficulties in collecting research data and implementing community service, including the completion time of research activities and community service that might experience obstacles. In addition, respondents also felt that the implementation of the two activities had not been optimized during the COVID-19 pandemic.

Based on Respondents' perceptions, the level of completion of research and community service activities would not be on time. 44.2% of respondents agreed that research and service carried out during the current Covid-19 period would not be on time for completion and publication. There were even those who agreed and strongly agreed, as much as 32.7%, that the implementation of research activities and community service would not be optimal. This condition would affect the quality of research results and the results of research and community service carried out.

There is an almost balanced opinion of respondents who agree (28.8%) and those who disagree (30.8%) that during the Covid-19 period, it would be difficult to publish their research results. In such conditions, respondents have the opinion that the university or the provider of research funds and community service.

The opinion of respondents that Universitas Brawijaya and other parties who provided research funds would give flexibility in completing and publishing the results of research activities and community service. There were as many as 50% and 23.1% who agreed and strongly agreed with the statement.

- Responses of Performance Mangement for Research and Community Service Implementation

When compiling strategic planning document for Research and Community Service, it is necessary to analyze the internal and external environment, that are 1) weakness aspects, 2) excellence aspects, 3) opportunity aspect, 4) and challenges aspects, as presented in the graph below:

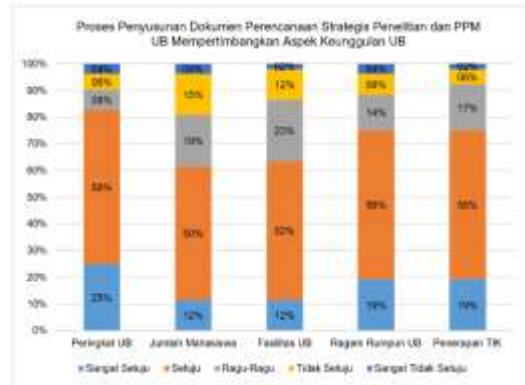
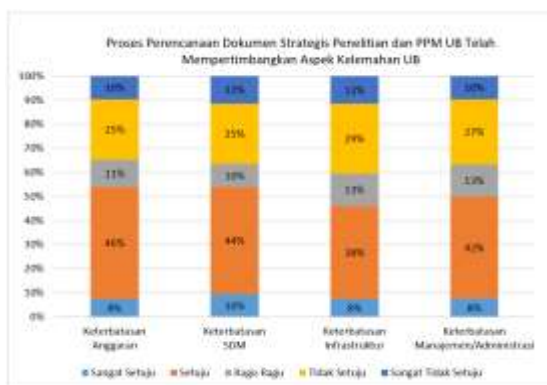


Figure 5 Respondents' Opinions on Research Strategic Doument Planning and Research and Community Service UB Has Considered Weaknesses and Strengths of Universitas Brawijaya

More than 38% of respondents agreed that the process of planning the strategic documents for research and community service of Universitas Brawijaya considered the aspects of UB's weaknesses, including limited budget, limited human resources, limited infrastructure, limited management/administration. Based on the opinion poll results, more than 25% respondents chose to disagree that so far the process of planning strategic documents has considered the aspects of UB's weaknesses. In addition, more than 50% of respondents agreed that it has considered aspects of UB's advantages, including UB's rank, number of students, UB's facilities, UB's variety of studies, and the application of ICT. In the opinion poll results, less than 15% were disagree that so far in the process of planning strategic documents has considered the aspects of UB's advantages. In addition to the weaknesses and strengths of UB, the strategic document planning process also considers the opportunities and challenges.

More than 54% of respondents agreed on considering the aspects of chances or opportunities in the external environment, which are the development of information technology, public trust, educational policies, and independent campus and independent learning. However, on the external aspect of the independent campus and independent learning, only 31% agreed. Meanwhile, on the opinion poll results, more than 15% chose to disagree that so far in the strategic document planning process these aspects have been considered, especially in the aspect of independent learning and independent campuses, which 35% of respondents chose not to agree, that these aspects have been considered in the formulation process. In addition, considering the aspects of challenges in the external environment, which are the emergence of foreign universities in Indonesia, increasing the quality of other public universities or private universities, demands for increasing lecturer competency qualifications, demands for improving educational infrastructure, and technology readiness, were agreed by more than

37% respondents. Meanwhile, on the results of the poll, more than 14% chose to disagree that so far in the strategic document planning process these aspects have been considered.

The business process in the organization is an organization's strategy in achieving predetermined organizational goals. Therefore, an opinion poll was carried out related to a clear business process in conducting research and research and community service in UB.

As much as 56% of respondents agreed that there was a clear business process in conducting research and community service. It can be said that business processes were clearly stated in the strategic planning document to fulfill the vision, mission, and goals of research and community service activities. Every business process activity carried out was in accordance with organizational values and standard operating procedures (SOPs) to produce outputs that could increase the value of the organization, in this study is Universitas Brawijaya, and could meet the demands of all internal and external stakeholders. The implementation of business processes cannot be separated from the information technology.

Budgeting based on a performance-based measurement mechanism explains that everything that will be conducted in research and community service must be measurable to produce measurable outputs and must be carried out in accordance with university values and standard operating procedures (SOPs) in order to produce a service or product that can increase the value of the company in customers point of view and can meet the demands of all internal and external stakeholders. SOPs become a navigation in the implementation of research and PPM. Each implementing work unit must include SOPs to carry out the vision, mission, and objectives stated in the Strategic Plan of Research and Community Service documents. The graph below contains the opinion of the respondents that the SOPs have been listed in the UB's Strategic Plan of Research and Community Service. According to respondents' opinion, as many as 52% agreed that the SOPs listed were part of research and community service activities.

As many as 54% of respondents agreed that the SOPs contained in UB's research and community service strategy planning documents have been used effectively. SOPs can be regarded as directives carried out so that the research and community service process did not divert from the predetermined path, namely the vision, mission, and goals listed in the strategic plan. Without the SOPs, it is possible that there will be bias and cannot achieve the previously agreed vision, mission, and goals in the implementation of research and community service in UB.

In the process of implementing strategic activities, it is necessary to evaluate and control strategies so that consistency in achieving goals is

maintained, not deviating from the vision and mission that has been set. Respondents chose to agree (65%) and strongly agree (25%), that the achievement of research and community service performance previously carried out was a consideration for the implementation of future programs and/or research and community service activities. It can be said that so far, the results have always been used to consider the implementation of future research and community service because strategic management is repetitive and always adapts through time. Because changes keep happening over time, the process of monitoring and evaluating research and community service must be carried out periodically to minimize bias towards the achievements or outputs. Respondents chose to agree (60%) and strongly agree (25%) that the process of monitoring and evaluating research and community service was carried out periodically. It aimed to improve the output quality and the quality of the academic community involved. Assessing the achievement of UB's research and community service performance was done to improve the quality, effectiveness, and success in achieving the goals in accordance with the vision and mission of the university.

5. Discussion and conclusion

In general, the process of research and community service during the Covid-19 pandemic has been adjusted. Based on the theoretical model developed by Pidd (2012), performance appraisal can be seen from several components that are the assessment of input conditions, the resources used to support the research process and community service. Regarding funding, respondents believed that there was a refocusing of funding for research activities and community service related to the handling or impact of Covid-19. It means that from a funding perspective, there were no problems for researchers and research and community service implementers. Another input is in the form of the availability of new rules or guidelines that can be used as a basis for conducting research and implementing community service. The flexibility to change the theme and mechanism of research and community service certainly made it easier to manage research and community service activities according to conditions in the field. In addition, researchers and community service implementers perceived that the funders or universities also provide flexibility for researchers and community service implementers in terms of completion and publication of their results. All of these are important inputs for conducting research and community service during the Covid-19 pandemic.

In terms of process performance, according to Pidd, this performance measurement is to answer how well we do what we have done. It means that whether the implementation of research and community service

during the Covid-19 pandemic has gone well. There is a performance measure exemplified by Pidd, namely the dimension of implementation time. In research and community service activities, the time to start and end the research and community service is important during the Covid-19 pandemic because it involves limited access to data collection and limited implementation of face-to-face research and community service. The results showed that most of the respondents felt difficult in research data collection and community service implementation. This is a condition that occurred during the Covid-19 pandemic that many researchers collected the data through surveys using certain electronic media. It means that there was a change in the research method used. In addition, some researchers also collected data through interviews or FGD (Focus Group Discussion) online. Even, there were some who carried out community service through online or offline field implementation (outside the network) with strict health protocols.

In the implementation process, respondents also felt their own difficulties with the method or method of data collection, so that some researchers and community service implementers had a perception that their activities would not be optimal. Several respondents were not sure to publish and complete the research and community service results on time. Such conditions, from an efficiency perspective, cannot be achieved properly since efficiency is often interpreted as a measure of timeliness and comparison with the resources used. Therefore, efficiency becomes difficult to achieve so that the question of how well we have done what we are doing cannot be achieved optimally.

Output performance is a measure of the achievement of research and community service activities in terms of results. Since performance measurement is to answer the question of how much did we do, the outcome assessment of research and community service activities is the completion level of the activities carried out and the achievement of the objectives of the activities carried out as formulated in the research and community service proposal. Most of the respondents felt pessimistic or unsure that they could complete it and produce maximum output. Because the process and output performance cannot be achieved optimally, it means that the quality of service, especially for community service activities, is not optimal. The Covid-19 pandemic condition limits research and community service activities and the involvement of target groups in the events carried out. In the context of qualitative research, telephone or online interviews are also an obstacle to obtaining in-depth information and understanding the context at the time of the interview.

Outcome performance according to Pidd (2012) is a performance measure that describes a program or goal of the institution to achieve. Thus, performance outcome is long-term that includes the resulting output. The achievement of its vision and mission in the field of research and community service are related with the context of the program or objectives of Universitas

Brawijaya. The institution related to the achievement of the vision and mission of Universitas Brawijaya in the field of research and community service is the Institute for Research and Community Service (LPPM). The vision of LPPM UB is as follows: "To become an institution with international quality standards, able to play an active role in nation building through Research and Community Service (PKM)." Meanwhile, the mission to be achieved by LPPM UB is as follows:

- Develop an umbrella for Research and Community Service based on Science and Technology
- Develop the relevance of Research and Community Service to improve the quality of education, the needs of the business world and industry and society in general
- Develop excellent research and improve the performance of Universitas Brawijaya in terms of research, community service, and international publications
- Increase the acquisition of Intellectual Property Rights
- Promote rural industrialization through the development of appropriate science and technology
- Improve the quality and identity of human resources as community leaders who are forward-looking, have a competitive entrepreneurial attitude, and excel in entering and creating the job market; and
- Empower the community by lifting from backwardness, alleviating from poverty, increasing its capacity as subjects of development through the process of developing scientific methods.

The performance of the outcome to be achieved by Universitas Brawijaya cannot be linked entirely in a short term during the Covid-19 pandemic. However, there is an indirect link to the achievement of performance outcomes from the implementation of research and community service if the pandemic condition cannot be handled properly and quickly. The long-term results of research and community service will be disrupted, and it is certain that the outcome performance cannot be achieved optimally.

The discussion of the second aspect on the response to research performance management and community service uses Armstrong's model that has been described in the theoretical framework above. There are four main components in performance management, namely planning, acting, monitoring, and reviewing. The four components cover the overall performance of research and community service, which are well planned, prepared manpower in the implementation, performance monitoring on implementation, and performance reviewing.

In general, research performance planning and community service have been formulated by the university by considering various conditions that occurred during the pandemic and conditions that existed within the university. The research and community service planning documents have been

formulated based on the occurring conditions, budget, human resources, research and community service performance achievements on the previous periods, and the infrastructure owned.

Based on the data presentation and discussion above, it can be concluded that in general there is a link between the current state of the Covid-19 pandemic and the performance of research and community service at Universitas Brawijaya as one of the state universities whom funds depend on the government's budget. The government's policy to refocusing the budget, which is an unavoidable factor, have an influence on changes in the theme and focus of research and PPM. The research findings related to research and community service performance can be described as follows:

- Process performance indicates a change in management and management of research and PPM. The institution was assessed by most respondents as having made changes to research and community service guidelines. Most of the respondents also experienced difficulties in data collection and implementation of community service.
- The output performance has not yet been maximized by researchers and community service implementers. The condition of the Covid-19 pandemic is considered to make the results of their activities not optimal and not according to the completion time and are hesitant to be able to publish effectively.
- Outcome performance cannot be seen as a whole in relation to the output produced. However, in the long term, there will be ineffectiveness in achieving the performance outcomes of the program or the vision and mission of the institution.
- Research and community service performance achievements during the Covid-19 pandemic experienced various obstacles and declines based on the perceptions of the respondents. Through good planning and supported by operational standards, both in the form of SOPs and business processes, it is possible for these activities to run under current conditions.

Based on these conclusions, the suggestions are as follows:

- A more mature planning for the implementation of research and community service in the future are needed. The preparation involves management or procedures regulated by the Institute as well as preparation by researchers and community service implementers in carrying out their activities in order to achieve maximum results.
- Adjustments to the research methods and the community service implementation also need to be made. The condition of the Covid-19 pandemic that has not yet clearly ended and a new life system called the "new normal" must be handled differently to be able to carry out research and community service activities.

- Theoretically and methodologically, this research is only a trigger for the development of similar research in assessing the impact of Covid-19 on research and community service management nationally as well as a broader unit of analysis target. This research was conducted only on a limited unit of analysis, so to get a macro picture of Covid-19 impact on the performance of Research and Community Service at State Universities and Private Universities, further research is needed.

Acknowledgements

The author would like to thank Nurjati Widdo, SAP., M.AP who helped prepare the survey data collection process through the internet and to Anna, SAP., M.AP who helped analyze the data.

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