Implementation of Internal Quality Assurance System in Order to Improve the Quality of Polytechnical Research

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Abstract

This research is motivated by the weak competence of lecturers in obtaining research grants, institutional support in providing budgets that are still inadequate, and the fulfillment of research criteria is still weak in supporting the accreditation of Polytechnics. This research approach is qualitative research with a case study method. The results of this study indicate that the determination in order to improve the quality of polytechnic research has been carried out but there is no specific policy on the research. The implementation of the internal quality assurance system in research has been carried out by monitoring the grants received by lecturers by looking at the outputs or publications. Evaluation of the internal quality assurance system in the study was carried out by means of an internal quality audit (AMI) which was held once a year to see the publications of each department. Control of the internal quality assurance system in the study was carried out by administrative control including the collection of SKP, BKD and AMI audits. The achievement of research Quality Standards that have been established through the application of SPMI is based on two main principles: continuous process improvement/improvement and continuous improvement of quality standards.

Keywords	Quality Assurance, Research, Polytechnic.

INTRODUCTION

The introduction includes background on issues or problems, urgency and rationalization of service activities. The activity objectives and problem-solving plans are presented in this section. Relevant literature reviews and analysis of specific situations for service are included in this section. The citation and citation model used in the article. Higher education is part of the national development movement, part of the community where it is located, which in developing societies has a dual mission, namely being a pioneer of scientific approaches to the development process and also being a guardian of moral values that maintain human dignity in society (Tilaar, 2008). Our society is a society that is developing/developing, which expects development processes and products from the pioneers of development, namely higher education.

The Internal Quality Assurance System (SPMI) is seen as one of the solutions to various problems of higher education in Indonesia. In addition, the Internal Quality Assurance System is considered capable of responding to the challenges of higher education considering the existing standardization is the result of the process of implementing the Internal Quality Assurance System in Higher Education. Standardization is a reference for all management carried out by universities, including in managing research quality. All universities must meet the standards that have been set in order to continue to maintain their existence.

In an effort to improve the quality of education, the government through the Ministry of Education and Culture issued a policy on education quality assurance. In accordance with the Regulation of the Minister of National Education Number 63 of 2009 article 1 paragraph (3) which states that "The Education Quality Assurance System, hereinafter

referred to as SPMP is a subsystem of the National Education System whose main function is to improve the quality of education". According to (Arifudin, 2019) stated that the ultimate goal of quality assurance of education is the high intelligence of human life and the nation as aspired by the Preamble to the 1945 Constitution of the Republic of Indonesia which is achieved through the implementation of the Education Quality Assurance System.

This quality assurance activity is a manifestation of the accountability and transparency of higher education management. In accordance with Law Number 12 of 2012 concerning Higher Education, that the Higher Education Quality Assurance System (SPMPT) consists of an Internal Quality Assurance System (SPMI) and an External Quality Assurance System (SPME). SPMI is developed by the concerned university, while SPME is carried out through accreditation. According to (Darmawan, 2021) that the quality assurance system is oriented towards achieving accreditation and developing the progress of an institution.

Based on law number 12 of 2012 concerning higher education and Permenristekdikti number 62 of 2016 concerning the higher education quality assurance system which is a determining aspect of increasing the competitiveness of universities. So that this becomes a guideline for the implementation of higher education management that can give birth to higher education quality as a result. However, not all universities implement this internal quality assurance system because of the various obstacles that each university has, including competent human resources (HR) and inadequate infrastructure and implementation of the internal quality assurance system.

It is clear that the Minister of Research, Technology and Higher Education Number 62 of 2016 concerning the Higher Education Quality Assurance System (SPM Dikti) states that there are 3 (three) quality assurance systems consisting of: 1) Internal Quality Assurance System (SPMI) which includes planning, implementation, evaluation, control and improvement, 2) External Quality Assurance System (SPME), and 3) Higher Education Database (PDDIKTI).

In achieving quality higher education, this higher education quality assurance is an effort made by universities as implementers to produce competent generations as graduates. According to (Sulaiman, 2016) argues that quality implies the degree (level) of superiority of a product (work) in the form of goods or services, broadly speaking, is the overall description and characteristics of the product or service that shows its ability to meet needs, expectations, and customer satisfaction.

In the context of quality assurance in higher education, it will be different from other educational institutions. Considering the quality assurance system in higher education is more complex. Universities must implement an internal quality assurance system in order to meet the quality standards that have been set. According to (Haapakorpi., 2011) suggests that "assurance of the quality of higher education is the process of determining and fulfilling the quality standards of management of higher education consistently and sustainably, so that stakeholders obtain satisfaction". So that in its implementation, higher education quality assurance policies must be able to adapt to changes and developments in science and technology as well as global dynamics that are so fast. This is in line with the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 5 of 2020 concerning Accreditation of Study Programs and Higher Education which provides new regulations regarding higher education standards.

The standards set by the National Accreditation Board for Higher Education (BAN PT) must be implemented in improving the quality of higher education. Higher education standardization is expected to improve the quality of higher education. So that the pattern of quality assurance is not only carried out by external parties, but also must be carried out
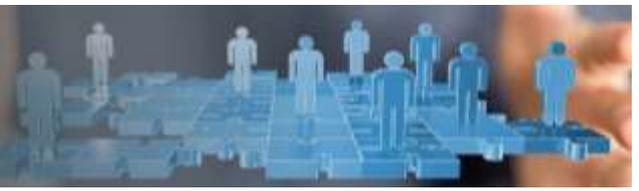
autonomously by universities in accordance with Permenristekdikti Number 62 of 2016 concerning the Higher Education Quality Assurance System (SPM Dikti).

This higher education quality assurance system aims to ensure the fulfillment of higher education standards in a systemic and sustainable manner. So it is hoped that the quality culture will grow and develop in the university environment. This is done by the universities themselves to control the implementation of higher education according to the standards set by the government as guidelines.

In achieving the quality of a university that in general, universities must implement the tri dharma which is one of the goals that must be achieved and carried out by every university in Indonesia. The core of the Tri Dharma of Higher Education consists of 3 points, namely: Education and Teaching, Research and Development, and Community Service. Where currently the research criteria are the fulfillment of a standard that is difficult to meet by a university, especially by a new university. In conducting research, it is strengthened based on the Law of the Republic of Indonesia Number 12 of 2012 concerning Higher Education Article 12 paragraph (2) states: "Lecturers as scientists have the task of developing a branch of Science and/or Technology through scientific reasoning and research and disseminating it". This law then creates policies and programs that can increase the research productivity of a lecturer.

The obligation to conduct research for a lecturer is a must based on the regulations that bind him. Renewal of knowledge must appear in universities with lecturers conducting research so as to build research-based classrooms. According to Permenristekdikti Number 20 of 2018 concerning Research, it is stated that activities are carried out according to scientific rules and methods systematically to obtain information, data, and information related to understanding and proving the truth or untruth of an assumption and/or hypothesis in the field of science and technology and interesting scientific conclusions for the purposes of scientific and/or technological progress.

Based on the description above, it appears that there are so many benefits that can be obtained from research activities carried out by lecturers for their professional duties as well as the development of science and the progress of this nation. Meanwhile, in higher education, the results of the research become one of the performances as quality universities. According to the Director General of Research and Development (2019: 1) that "the assessment of university research performance indicators include research resources (30 percent), research management (15 percent), outputs (50 percent), and revenue generating (5 percent)". Considering the strategic role of higher education research performance assessment, all universities are obliged to submit their research performance data. Furthermore, according to the Director General of Research and Development (2019: 1), the ranking of research clusters consists of: 1) Independent Group is the autonomous management of funding and selection of research proposals by internal reviewers, there are 47 universities, 2) Main Group is research funding conducted autonomously and supervised by the Directorate of Research and Community Service (DPRM), and the selection of research proposals is carried out by internal reviewers, there are 146 universities, 3) Middle Group is the research proposal selection process carried out by internal reviewers and the Directorate of Research and Community Service (DPRM) , there are 479 universities, and 4) Assisted Groups is a research proposal selection process carried out in full by the Directorate of Research and Community Service (DPRM), there are 1,305 universities.

However, according to the available statistical data, lecturer research is still lacking, so it has implications for the achievement of higher education research performance. Of the 100 (one hundred) best universities in research performance, there are only 2 (two)

Polytechnics included in it, namely the Main Bali State Polytechnic (Main Cluster) and Malang State Polytechnic (Main Cluster) based on the Decree of the Director General of Research and Development Strengthening number B/5678 /E1.2/HM00.03/2019 dated November 13, 2019 concerning Clusters or research-based Universities grouping.

Furthermore, in the Clustering of Research Performance-based Universities, based on the Decree of the Director General of Research and Development Strengthening number B/5678/E1.2/HM00.03/2019 dated November 13, 2019 concerning Clusters or research-based Universities grouping, it shows that Polytechnics in West Java have not shown ranking well in the research performance-based college cluster.

Table 1.1 Cluster Data Based on
Polytechnic Research Performance in West Java
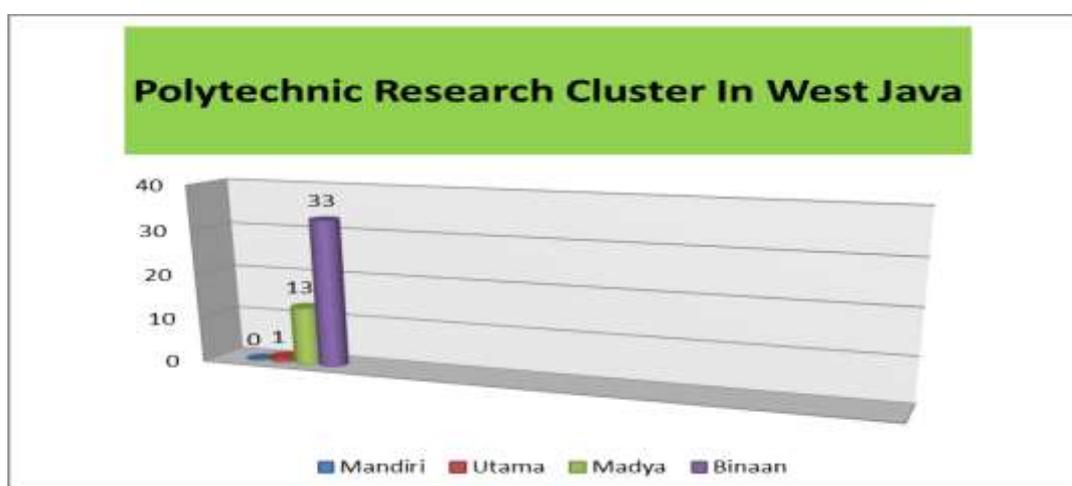
Source: Director General of Research and Development Strengthening in 2019

With regard to the quality of the research results, according to the Directorate General of Higher Education of the Ministry of National Education as quoted by (Oviyanti, 2018) it can be said that quality research has the following characteristics: (1) research is carried out in the right way, (2) the content of the writing must meet the requirements of a complete scientific work, namely the existence of a problem formulation that contains novelty values (novelty/ies), problem-solving methodology, complete and clear data support or up-to-date theory, as well as conclusions and bibliography, (3) research results or ideas are published in the form of books that have an ISBN, or scientific magazines that have an ISSN (international, nationally accredited, nationally not accredited), or seminar proceedings that have an ISBN or ISSN, or popular magazines, or newspapers.

Based on the results of various studies that have been carried out that the obstacles in the implementation of the internal quality assurance system indicate that the implementation of the internal quality assurance system has not been carried out comprehensively because universities have not been able to formulate the contents of policies, standards and SPMI manuals, including weaknesses in the formulation of indicators of successful targets. measurable.

According to (Altbach., 2004) suggests that "higher quality universities or which have the characteristics of world class universities include: excellence in research,
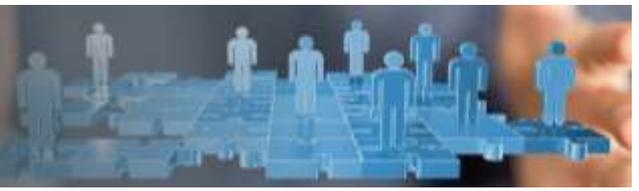
academic freedom, institutional governance and adequate facilities". This shows that the quality of research has a major role in improving the quality of higher education.

With the total number of polytechnics in West Java as many as 47 (forty seven) Polytechnics consisting of public and private, as well as 5,238 institutions listed on the Science And Technology Index (SINTA). The quality rating of the Science And Technology Index (SINTA) research at the polytechnic under study is influenced by various problems that occur, namely as follows: 1) The carrying capacity of the research implementation is still weak, 2) Institutional support in providing budget is still inadequate, 3) Lecturer competence is still low. weak in obtaining research grants, 4) Lecturers are still teaching-oriented, 5) Lack of training in the ability to conduct research and lecturer publications, 6) Research institutions have not been managed properly by the institution, 7) Still weak in the ability of lecturers' research methodology and writing, and 8) Not yet established cooperation with other parties in optimizing the implementation of research.

The purpose of this study was to obtain an overview and analyze related to the internal quality assurance system in order to improve the quality of higher education research. Where this study seeks to describe the process of the internal quality assurance system including the stages of determining, implementing, evaluating, controlling, and improving the internal quality assurance system to improve the quality of higher education research on research standards.

So that this research is expected to provide answers related to the management of higher education based on an internal quality assurance system to face the standardization that is needed by a university to continue to serve education. Considering that many universities have had their operations terminated because they do not meet the standards set by the National Accreditation Board for Higher Education (BAN PT).

This problem needs further research so that valid data can be found and at the same time an alternative solution can be determined. On this basis, the authors raised the title "Implementation of an Internal Quality Assurance System in order to Improve the Quality of Polytechnic Research in West Java" (Case Study at Subang State Polytechnic and Bhakti Asih Polytechnic Purwakarta)

IMPLEMENTATION METHOD

This study aims to analyze and describe the implementation of the Internal Quality Assurance System in order to improve the quality of Polytechnic Research in West Java. The approach used in this study is a qualitative approach. According to Bogdan and Taylor in (Bahri, 2021) stated that a qualitative approach is a research procedure that produces descriptive data in the form of written or spoken words from people and observable behavior. This is done by transcribing the data, then coding on the notes in the field and interpreting the data to obtain conclusions. The type of research used in this research is a case study. According to (Rahayu, 2020) that a case study is an empirical research that investigates a symptom in a real-life setting. The results of this study were collected with primary data and secondary data.

RESULTS AND DISCUSSION
Establishment of an internal quality assurance system in order to improve the quality of polytechnic research.

The preparation of each standard needs to follow a specific standard setting and compliance mechanism according to the type of standard. However, in general, the determination and fulfillment of quality standards must be carried out following the

mechanism. In the internal quality assurance system related to research fields at 2 (two) polytechnics, there is no specific policy for improving the quality of polytechnic research. The policies related to improving the quality of research are directly related to the role held by the Center for Research and Community Service (P3M). In particular, the formulation of the definition of the term internal quality assurance system in the field of research does not yet exist, considering that policies related specifically to the field of research in order to improve the quality of research in polytechnics do not yet exist and are socialized to the entire academic community. The standard statement of the content of this research is prepared by the polytechnic based on a comprehensive condition analysis process.

In other words, a Polytechnic is said to be of high quality if it is able to establish and realize the campus vision through the implementation of its mission (deductive aspect), and is able to meet the needs/satisfy stakeholders (inductive aspect), namely the needs of students, society, the world of work and professionals. Thus, the Polytechnic must be able to establish a process that guarantees the achievement of quality in the form of a rule or policy for the implementation of all higher education activities, including policies in determining quality assurance in the field of research. In these 2 (two) Polytechnics, there is no specific policy in determining the quality of polytechnic research. This is not in line as stated by (RistekBrin, 2020). The objectives of research at the Polytechnic are as follows: 1) Produce research in accordance with the Regulation of the Minister of Education and Culture No. 3 of 2020 concerning National Standards for Higher Education, 2) Guaranteeing the development of specific superior research, 3) Increasing research capacity, 4) Achieving and improving the quality according to the target and relevance of research results for the Indonesian people, and 5) Increasing the dissemination of research results and intellectual property protection nationally and internationally.

The standards set are formulated based on laws and regulations, the results of self-evaluation on ongoing performance, input from stakeholders, results oftracer studies, and the development policy of the Directorate General of Higher Education's quality assurance. So that the determination of research quality standards is in accordance with existing regulations and accommodated with policies from the Polytechnic in the context of achieving research quality.

Implementation of an internal quality assurance system in order to improve the quality of polytechnic research

The current quality assurance system is carried out by all components in the education unit. the internal quality assurance system covers all aspects of education by utilizing various resources to achieve the National Education Standards (SNP). This quality assurance system is evaluated and developed on an ongoing basis and is also determined by the Polytechnic Internal Quality Assurance System Institute to be included in the guidelines for managing educational units and socialized to all stakeholders in the polytechnic. In order for the implementation of SPMI to be carried out by all stakeholders at the Polytechnic optimally, socialization to all stakeholders must be carried out. Therefore, the Polytechnic must try to put various existing work systems in a manual.

In order to ensure that the implementation of academic activities can be achieved as expected, the polytechnic has stages in the internal quality assurance system. Specifically related to the technical instructions for the internal quality assurance system in the field of research, it is necessary to have in order to carry out the research process in accordance with existing regulations. Training is needed and must touch specifically with lecturers related to increasing competence in conducting research. The form of investigation carried out by the Center for Research and Community Service (PPPM) is related to research

results that meet standard and legal universal scientific principles, are documented, registered and disseminated through national and international scientific forums, and can be socially and morally accountable and research code of ethics . As for the outputs produced by the academic community through activities that meet scientific rules and methods systematically according to scientific autonomy and academic culture. This should be supported in the review process specifically on the publication quality of each lecturer.

This is in line with (Aldammagh, 2021) who stated that "there is a positive relationship between the independent variables namely governance standards, accreditation and quality requirements, and the classification of Palestinian universities and the dependent variable represented by the performance of Palestinian private universities". So that the mechanism in the internal quality assurance system becomes a pattern in the implementation of quality assurance at a university.

Evaluation of the internal quality assurance system in order to improve the quality of Polytechnic research

Evaluation of the implementation of the internal quality assurance system carried out is an activity of checking, measuring, assessing and reporting various quality assurance activities to the Director. Evaluation of the implementation of the internal quality assurance system is carried out to evaluate the direction of SPMI. SPMI Policy Evaluation is carried out in its entirety, every 4 (four) years. Meanwhile, evaluation of SPMI implementation is carried out every semester for academics and annually for non-academics, both in the form of AMAI, SIAKAD, and SIAKEM reports. Evaluation of quality conformity, both standards and procedures, is carried out through the implementation of quality audits and self-evaluations to measure quality gaps. Regarding the evaluation of the results of the research field, an evaluation from SPMI has not been carried out regarding improving the quality of research. This will have an impact on the development of research quality.

However, efforts to improve the quality of research have not been carried out comprehensively in supporting the improvement of the quality of lecturers and polytechnics. The culture of research quality has not yet become a culture that lives in the midst of college life. This is not in line with the Directorate General of Higher Education quoted by (Oviyanti, 2018) which suggests that quality research has the following characteristics: (1) research is carried out in the right way, (2) the content of the writing must meet the requirements. -requirements for a complete scientific work, namely the existence of a problem formulation containing novelty/ies value, problem-solving methodology, complete and clear data support or up-to-date theory, as well as conclusions and bibliography, (3) research results or results thoughts are published in the form of books that have an ISBN, or scientific magazines that have an ISSN (international, nationally accredited, nationally unaccredited), or seminar proceedings that have an ISBN or ISSN, or popular magazines, or newspapers.

Control of the internal quality assurance system in order to improve the quality of polytechnic research

Standard control is carried out with a general principle, namely to ensure that the implementation of programs and activities at the Polytechnic is guided by the achievement of standards and by following agreed procedures. Changes to standards can only be made through the mechanisms that have been set out in Standard Setting and Setting. Then, to control standards, all units within the Polytechnic need to legally establish the standards

that are applied, including the Center for Research and Community Service (P3M) in order to improve the quality of research. In Standard Implementation, the monitoring and evaluation phase of standard implementation is part of the Standard Control aspect. In addition to monitoring and evaluating the conformity of the implementation of the standard, the unit leader can use the results of the monitoring and evaluation to control the standards that have been set. Implementation of control in the field of research is carried out through the collection of SKP, BKD and AMI audits.

This is as stated by (Brown, 2008) suggesting that "the four dimensions of quality in education: accountability, curriculum alignment, assessment, and student satisfaction. Where the quality of research is the result of the autonomy of higher education institutions in managing research institutions as an integral part of the management of higher education institutions."

Then, to control standards, all units within the Polytechnic need to legally establish the standards that apply, including the Center for Research and Service. to the Community (P3M) in order to improve the quality of research. This is in order to build a culture with binding regulations as part of a responsibility.

Improve the quality Improvement of the internal quality assurance system in order to improve the quality of polytechnic research

The application of the principle of continuous improvement through the PPEPP mechanism, while the principle of sustainable quality is implemented through the mechanism of the Quality Control cycle. The consistent application of PPEPP will realize Kaizen (continuous improvement) in the quality of higher education. With continuous improvement, it is expected to optimize the achievement of research quality in universities. The quality of this standard improvement is carried out on the elements of Behavior, Competence, Degree simultaneously or partially.

The implementation of research quality improvement is carried out in cycles with the following stages: a) determination of Quality Manual, b) determination of Quality Standards, c) monitoring and internal quality audits, d) implementation of Self Evaluation (1) Self Evaluation (2) Improvement Efforts (3) Audit Quality (4) Solutions and Improvement Results (5) Systematic and periodic standard improvement, e) preparation of Corrective Action Recommendations (Correction Formulas), and f) implementation of programs and activities for continuous quality improvement. The follow-up to improving the quality of research at the Polytechnic is based on the strategy for improving the Center for Research and Community Service (P3M), namely as follows: a) Formulation and development of research management system policies, b) Socialization and publication of research management system policies, c) Monitoring and evaluation implementation of research to ensure the quality of research, d) Consolidation of research methodologies through workshops/seminars/dissemination. With the strategies made can optimize the achievement of research quality.

This is as stated by (Sauri., 2019) that "Implementation of concepts and policies for implementing higher education SPMI is made and disseminated to all leaders, lecturers, students, and education staff at the university and faculty level and study programs through focus group discussions, as well as workshops".

Obstacles encountered in the implementation of the internal quality assurance system to improve the quality of Polytechnic research.

No matter how sophisticated a system is, it will not be optimal without quality culture or habits. This is what happened to some obstacles, psychologically more towards
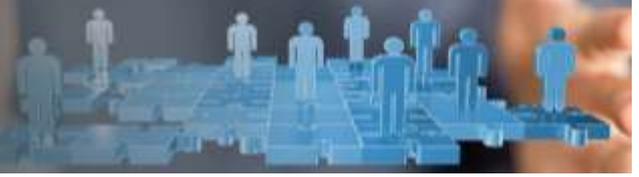
getting used to carrying out every activity including the research process with an internal quality assurance system as a stage or cycle that must be followed. The quality culture has not yet been developed in the research process conducted by lecturers. One example in a research proposal that does not follow the writing method. In administrative barriers there are no obstacles, everything goes according to the predetermined program. This is in line with the objectives of the administrative organization in the management of the internal quality assurance system. One of the evidences is the regular reporting of research results and PKM held by the Center for Research and Community Service (P3M).

Solutions to face obstacles to the internal quality assurance system to improve the quality of polytechnic research.

In order to consolidate to deal with these obstacles, it is necessary to involve all parties and provide special time to discuss them. Synergy is needed to produce comprehensive improvement efforts on all systems. Until now, there has been no activity specifically discussing the consolidation of the internal quality assurance system in order to improve the quality of polytechnic research. Equalization of perceptions needs to be done in order to provide solutions to the existing obstacles in the implementation of the internal quality assurance system to improve the quality of polytechnic research. Solutions related to equalizing perceptions at every meeting held by the Center for Research and Community Service (P3M). The orientation is still on the research theme and the limitations of existing funds. Dialogue is clearly needed in order to consolidate and equalize perceptions to provide solutions to the obstacles in the implementation of the internal quality assurance system to improve the quality of polytechnic research. Dialogue is held at every meeting held by the Center for Research and Community Service (P3M). Meanwhile, the new dialogue is limited with fellow lecturers regarding the research theme and the limited budget available for selecting publications.

CONCLUSION

Implementation of the internal quality assurance system in order to improve the quality of polytechnic research is carried out by the head of quality assurance but there is no specific policy for improving the quality of higher education research, monitoring of grants received by lecturers by looking at the outputs or publications produced, internal quality audits are held 1 (once a year) only see the publications of each department, there has been no effort to improve the quality of research, control is carried out on the administration including the collection of SKP, BKD and internal quality audits, and there has been no follow-up on improving the quality of research with a new orientation on increasing publications. So that improving the quality of research in supporting the fulfillment of higher education accreditation has not run optimally and is constrained by various obstacles. However, despite all its limitations, the implementation of the internal quality assurance system in order to improve the quality of research has been carried out based on the stages of determination, implementation, evaluation, control and improvement.

REFERENCES

Aldammagh. (2021). Governance Standards and their Requirements in Private Palestinian Universities in the Southern Governorates and their Relationship to the Level of Performance. *The Arab Journal for Quality Assurance in Higher Education.*, *14*(47), 73-101.

Altbach. (2004). Globalisation and the university: myths and realities in an unequal world. *Tertiary Education & Management.*, *10*(1), 3-25.

Arifudin, O. (2019). Manajemen Sistem Penjaminan Mutu Internal (SPMI) Sebagai Upaya Meningkatkan Mutu Perguruan Tinggi. *MEA (Manajemen, Ekonomi, & Akuntansi)*, *3*(1), 161–169.

Bahri, A. S. (2021). *Pengantar Penelitian Pendidikan (Sebuah Tinjauan Teori dan Praktis)*. Bandung : Widina Bhakti Persada.

Brown. (2008). Continous quality Improvement : an Effetive strategy for Improvement of Program Outcomes In a higher Education Setting. *Journal Nursing Education Perspective.*, *29*(4), 205-211.

Darmawan, I. P. A. (2021). *Total Quality Management Dalam Dunia Pendidikan" Model, Teknik Dan Impementasi"*. Bandung: Widina Bhakti Persada Bandung.

Dirjen Penguatan Risbang SK nomor B/5678/E1.2/H.M.00.03/2019 tanggal 13 November 2019 tentang Klaster atau pengelompokkan Perguruan Tinggi berbasis penelitian.

Haapakorpi. (2011). Quality Assurance Processes in Finnish Universities: Direct and Indirect Outcomes and Organisational Conditions. *Quality in Higher Education.*, *17*(1), 69-81.

Oviyanti. (2018). Kinerja Penelitian Dosen Prodi Pendidikan Agama Islam Fakultas Ilmu Tarbiyah Dan Keguruan Universitas Islam Negeri Raden Fatah Palembang. *Jurnal Tadrib.*, *4*(1), 138-162.

Peraturan Menteri Pendidikan Dan Kebudayaan Republik Indonesia Nomor 5 Tahun 2020 Tentang Akreditasi Program Studi Dan Perguruan Tinggi

Permendiknas Nomor 63 Tahun 2009. Tentang Sistem Penjaminan Mutu Pendidikan.

Permenristekdikti Nomor 20 tahun 2018 tentang Penelitian.

Permenristekdikti Nomor 62 tahun 2016 tentang system penjaminan mutu Pendidikan tinggi (SPM Dikti).

Rahayu, Y. N. (2020). *Program Linier (Teori Dan Aplikasi)*. Bandung : Widina Bhakti Persada.

RistekBrin. (2020). *Panduan dan Pedoman Penelitian dan Pengabdian Kepada Masyarakat Edisi XIII*. Jakarta: RistekBrin.

Sauri. (2019). Strategi Peningkatan Mutu Pendidikan Melalui Implementasi Sistem Penjaminan Mutu Internal (SPMI) Di Universitas Islam Nusantara Bandung. *Jurnal Media Nusantara.*, *16*(1), 27-40.

Sulaiman. (2016). Implementasi Sistem Penjaminan Mutu Internal sebagai Upaya Meningkatkan Mutu Pendidikandi Universitas Gadjah Mada. *Jurnal Akuntabilitas Manajemen Pendidikan*, *4*(1), 17-32.

Tilaar. (2008). *Manajemen Pendidikan Nasional*. Bandung : PT. Remaja Rosdakarya.

Undang-undang nomor 12 tahun 2012 tentang Pendidikan Tinggi