Learning Plan Evaluation of Quality Assurance Biology Education

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ABSTRACT

Higher education has regulations through standard set as quality assurance that must be fullfilled. This study aims to evaluate the learning planning of biology lecturers before carrying out lectures so that they can measure the achievement of the quality of biology learning planning. The research method is descriptive qualitative with QA evaluation technique. The results of the study showed that as a whole there was an increase in the percentage of fulfillment of the components of the lesson plan for a biology education course in 1 year, there were several components that had decreased so that control was needed in the form of solutions as the direction for further improvement programs. In conclusion, the results of the evaluation showed an increase in all components of the lesson plan compared to the following semester, but there were several components that needed improvement

Keywords: biology learning planning, evaluation, QA,

Introduction

Higher education in Indonesia is very important to produce the nation's generation. In this case, the government makes minimum standard regulations that must be fulfilled by all education institution (Mendikbud RI, 2020). UIN Walisongo has set standards with exceed government standards that have been stated in the quality policy. One of the standards set is the process standard, which is part of the lesson plan preparation (RPS) for lecturers in one semester. The policy contains components as a reference for lecturers in designing lesson plans (Walisongo, 2020).

Based on the socialization results of Quality Assurance Agency, it is necessary to carry out an evaluation of the lesson plan in order to find out how much the success of the lecturer's learning design has been achieved in one semester before the lecture is held. Based on the socialization from the study program manager, the biology education learning plan is very important because The Biology education learning plan is important to ensure the quality of teaching and learning process met the standard. It will affect the course of the program that has been prepared.

Quality control assurance is done to fulfill Permendikbud Number 28 of 2016 concerning the System Quality Assurance of Elementary and Secondary Education mandate that each educational unit is required to establish SPMI with the aim of: (1) to control administration of education by education units in primary education and secondary education so as to materialize quality education, and (2) to ensure compliance standards in educational units systemically, holistically, and sustainable, so that a culture of quality grows and develops in an independent education unit. Therefore, system Education quality assurance is basically controlling educational unit in compliance with National Standards Education (Barnawi & M.Arifin, 2019)

Therefore an evaluation is needed so that it can measure the achievement of the semester lesson plan components for biology education lecturers. According to Idrus (2019) evaluation is a measure of the success of a program as the achievements have been achieved so that the assessment used is accurate and measurable, for example educational programs. So it can be concluded that the evaluation of biology lesson plans can measure the success of biology education lecturers in designing learning outcomes (LO) to be implemented, teaching materials, methods & technique to be used. This is in accordance with previous studies from Elbadiansyah & Masyni (2022) study program development is determined by the main achievements, namely the vision and learning outcomes that are planned, effective and efficient both in terms of learning, research and service. According to research Kleickmann, et al., (2013) The result is that professional educators are not only knowledgeable but also proficient in planning clear lessons to be implemented. According to research Kristín (2022). The result is that educators must carry out learning planning through literacy skills that are owned and socialized to the academic community including students so as to provide democratic space, openness of learning planning which will be carried out in one semester and agrred together. According to research Sudiyono (2020) one of the lecturer's tasks is pedagogic ability, namely designing clear learning objectives, preparing complete equipment because this is the spearhead of the lecturer's achievement/failure in carrying out quality learning in an institution. Based on previous research studies, it can be concluded that the evaluation of biology educator learning plans is very important to do both for the graduates to be produced and as one of the study program developments. The evaluation is done by human research in the higher institution. According to research Zhai et al (2020) that evaluation is better done by the academic community in institutions rather than using machines because machines are less sensitive than humans, although in terms of consistency the machine is better. According to research (Sugiyanta, 2016) the resulting evaluation product is the result of measuring the

quality of a lesson beginning with an evaluation of the lesson plan and feedback. According to research (Six, 2021) Feedback is a real effort from an evaluation, especially in education as an effort to monitor/check a program and the improvements that will be made and the impact that will occur if things do not match what was planned. According to research Hofer et al., (2020) improvements made can be in the form of recommendations that will be reported as a decision-making effort as a consideration for institutional managers in carrying out control efforts so as to prevent adverse effects and negative criticism from external evaluation parties in the future.

Based on the exposure that has been explained, the researcher compiled a formulation of the problem, namely how the results of the evaluation of QA-based biology education learning plans. The advantage of this research can analyze the evaluation results of QA-based biology education learning planning, and analyze recommendations to develop biology education study programs so they can be used as material for evaluating policy managers to prevent adverse impacts and prevent negative criticism from external evaluation parties and efforts to ensure the quality of learning in biology courses.

Methods

Location and Research Time

This research was conducted in the biology education study program of UIN Walisongo. Data was taken for one year, namely before the first semester lectures started, namely odd semester 2021/2022 and even semester 2021/2022. The sampling technique used random sampling. The samples used were semester 1, 3, 5 and even semester 2, 4, 6 courses. The 7th and 8th semester courses are not included because they are in the form of PPL, KKN and thesis.

Types of Research

This type of research is qualitative descriptive research. his study reviews the problems, phenomena, literature review, data collection and data analysis that are described to be evaluated (Creswell, 2012). The research evaluates RPS by looking at the percentage of assessments from the previous semester as a form of evaluation of the PPEPP model. control and enhancement. This semester comparison is used to check whether there has been an increase or not as a quality control stage. Analize usess PPEPP model. This research used implementation QA by the PPEPP model (*Penetapan, Pelaksanaan, Evaluasi, Perbaikan, Peningkatan*) model, which is a systematic and measurable evaluation model that includes continuous improvement for the satisfaction of the academic community users (Berhard., 2012). The Figure 1 is a PPEPP model according to (Kemenristek, 2016).

Penetapan Standar Dikti

Pelaksanaan Standar Dikti;

Evaluasi (Pelaksanaan) Standar Dikti;

Pengendalian (Pelaksanaan) Standar Dikti; dan

Peningkatan Standar Dikti.

Figure 1. Caption about this figure should be written in lowercase

Based on the stages of the PPEPP model based on QA (Quality Assurance), the Tabel 1 research steps are produced.

Tabel 1. Research Procedure

Stage	Implementation
Standard Setting	Institutions have regulations to monitor every lecturer's learning plan, there is already a lesson plan.
	Each RPS must fulfill to all standard process components in the UIN Quality Policy and include very proper category.
	To arrange the assesment instrument of lesson plan semester which has been setted.
Implementation	Conduct a validation test of the RPS assessment instrument.
	Monitor and check RPS from biology education lecturer courses.
Evaluation	Calculating the results of checking.
	Analyze the achievement and non-achievement of the RPS component.
Controlling	Findings that were not reached made a recommendation for improvement.
Enhancement	There is an increase in data results from the standards set.

Data Collection

Lesson plan component assessment instrument sheets
This sheet is used to do measurement achievement plan lesson component. The aspects measured are adjusted to the standard components of the UIN quality policy process (Walisongo, 2020). Components standard have included by role SPMI UIN Walisongo as prosess standard.

Data Analysis Technique

The data analysis phase was obtained when data collection in the field was completed. This is in accordance with research (Rachman, 2020) regarding the implementation of KPI-based evaluation in which the data analysis technique used also comes from field data. Before going into the field, the researcher carried out the instrument validation and reliability processes first. Here are the steps:

1. Expert Validation
   Expert validation aims to validate the instrument in terms of material and construction that has been designed by researchers. Construction analysis is a kind of author's style in the form of sentences, phrases, words. Material analysis is to look at the suitability of the instrument components with the standard reference components of the process to be measured. Instrument validation was carried out by material expert validation and practitioner experts. Every instrument that will be used regardless of the measurement capacity must be validated by experts first (Arikunto, 2020). This is in accordance with

research research ([Anggis & Wulandari, 2020](#)) namely research that measures student cooperation was used expertise validated while measured corporation skill of student. According to research ([Shofwanthoni et al., 2019](#)) instruments that are made validated by several people according to expertise.

2. Reliability
    Reliability means to be trusted. Reliability was carried out once and used the alpha Coanbachch formula with a scale/score of 1-4 that meaning is not good, enough, good and very good. That the instrument will be used to measure the object whose reliability is to be sought and will be assessed. By alpha coanbach formula, this realibilty instrumen is This test uses 2 material experts and 30 practitioners whose scores are calculated for reliability according to the Coancbarph Alpha formula by looking at the number of questionnaire items and the respondent's score.

3. Lesson Plan Implementation
    After the validation and reliability of the instrument was carried out, an assessment of the Biological Education Study Program was carried out. The score used is 1-4, namely low, decent enough, decent and very good then look for the average proportion of the score obtained. According ([Arikunto, 2020](#)) The percentage data that has been obtained can be included in the categories in Table 2.

Tabel 2. Percentage Category

Percentage	Category
81-100%	Very worth it
61-80%	Worth
41-60%	Worth enough
21-40%	Low

([Arikunto, 2020](#))

The data collection technique is documentation and the lecturer's RPS assessment sheet. The data analysis technique is descriptive qualitative by looking at the average score of the lecturers RPS component as assessed by GKM that responsible for quality assurance in study program, such as 25 plan lesson (RPS) lecturer every semester will be used learning implemention to keep quality of biology education learning and institution.

Results and Discussion

The results and discussion of this research will be discussed in accordance with the research problems, namely as follows Biology Education Learning Plan Evaluation of Quality Assurance Based. This evaluation was carried out using the QE approach, namely the PPEPP evaluation model technique which can be produced as follows.

Setting/Determination
Institutions that have regulations to monitor every lecturer's learning plan already have a lesson plan, each lesson plan must meet all the standard components of the process in the UIN Quality Policy, compile a predetermined Semester Lesson Plan of assessment instrument that is as many as 21 components of the RPS to be measured.

Implementation

The researcher conducted a validation test of the RPS assessment instrument then monitored/checked the SLP from the biology education study program lecturer course. Data validation results from experts, namely material experts by 85% and practitioner experts by 87%. So it can be concluded that it is in the very feasible category. The results of the reliability calculation are 0.89 which means it is high. After that, researchers took data in the field using existing instruments. Data collection activities are carried out in preparation for lectures at the beginning of the odd semester of the 2021/2022 academic year and the even semester of the 2022/2023 academic year.

Evaluation

According to research (Idrus, 2019) evaluation is a tool to measure the success of a program as the achievements that have been achieved so that the assessment used is accurate and measurable. At this stage the researcher calculated the data in the field, namely that in the odd semester of the 2021/2022 academic year, 87% of lecturers in biology education courses submitted RPS and 100% of lecturers collected RPS in the even semester of 2021/2022. The overall average percentage of the odd semester biology education lesson plan component for the 2021/2022 academic year is 83%. The components that have the lowest percentage are the integration of research/service into learning, bibliography, structured assignments. The overall average percentage of the 2021/2022 biology education lesson plan component is 89%. The components that have a decent enough percentage are the integration of research/service into learning, bibliography. The following table shows the average results for the 2021 biology education study program component.

Tabel 3 Average overall RPS components of biology education study programs in 2021

No	Semester TA 2021/2022	Percentage
1	Gasal	83%
2	Genap	89%

Based on Table 3, the results of the evaluation were obtained, namely the achievement and non-achievement. The achievement is that the average percentage of all RPS components is classified as very decent/very good in accordance with the established standards. The unachieved is that not all of the subjects used as samples have their lesson plans. Another failure is that there are several components that have a low percentage or are quite feasible and lacking, namely the integration of research/devotion into learning, bibliography and structured assignments in odd semesters so that recommendations/improvements are needed. This is in accordance with research (Hofer, S. I., Holzberger, D., & Reiss, 2020) improvements made can be in the form of recommendations that will be reported as a decision-making effort as a consideration for institutional managers in carrying out control efforts so as to prevent adverse effects and negative criticism from external evaluation parties in the future. According to research (Hartati, 2016) improvement of learning planning aims to create an increase in the quality of learning, planning is adjusted to the curriculum and the conditions of differences in students that need to be considered, therefore an evaluation is needed.

So it can be concluded that evaluation is very important to do in each semester to see whether there is an increase in the following semester by looking at each component of the biology education study program study plan. According to research (Imana & Aprilia, 2020) states that the evaluation of learning plans must look at the suitability of the RPS components with the quality policy of an institution.

Controlling

Control is the evaluation stage of QA in the form of controlling. The purpose of this activity is that there are no sustainable standard deviations. Therefore an improvement is needed. Control in the form of recommendations/improvement of an inaccessible data from the evaluation results. Control is very important so that there is no decline in the implementation of standards and continuous deviations. According to research (Hofer, S. I., Holzberger, D., & Reiss, 2020) improvements made can be in the form of recommendations that will be reported as a decision-making effort as a consideration for institutional managers in carrying out control efforts so as to prevent adverse effects and negative criticism from external evaluation parties in the future. So, the control results can be seen in Table 4.

Tabel 4. Controlling the achievement of odd semester 2020/2021 RPS components

No	Findings	Recommendation
1	There are several courses that do not have an RPS before lectures start at least H-1	The quality control group for the biology education study program ensures that all course lectures collect their lesson plans by reminding lecturers who often forget or are too busy.
2	The research/service integration component in learning is 30%	Biology Education Lecturers can include research/service articles into learning materials
3	Refference	The study program provides courses according to science Lecturers try to arrange articles according to the subject
4	Structured assignment	Lecturers should make a structured assignment rubric and explain it at the meeting that gets the assignment

Based on the table data above, there are various kinds of recommendations that have been submitted to the study program quality control group so that in the following semester there will be improvements and improvements to a standard. The results of controlling the achievement of the 2021 even semester RPS components are in Table 5.

Tabel 5. Controlling the achievement of the 2020/2021 even semester RPS component

No	Findings	Recommendation
1	The research/service integration component in learning is 47%	Biology Education Lecturers can include research/service articles into learning materials Biology education lecturers can conduct research with students in lectures that are taught
2	Refference	The study program provides courses according to science Lecturers try to arrange articles according to the subject Lecturers can make books according to their knowledge Look for UIN Walisongo articles if the lecturer in question has not had time to make articles/books according to the course

Enhancement

At this stage, There is an increase in data results from the standards set .The researcher correlated the overall average of the odd and even semester RPS components for the 2021 academic year. The results can be seen in graph 1 as follows.
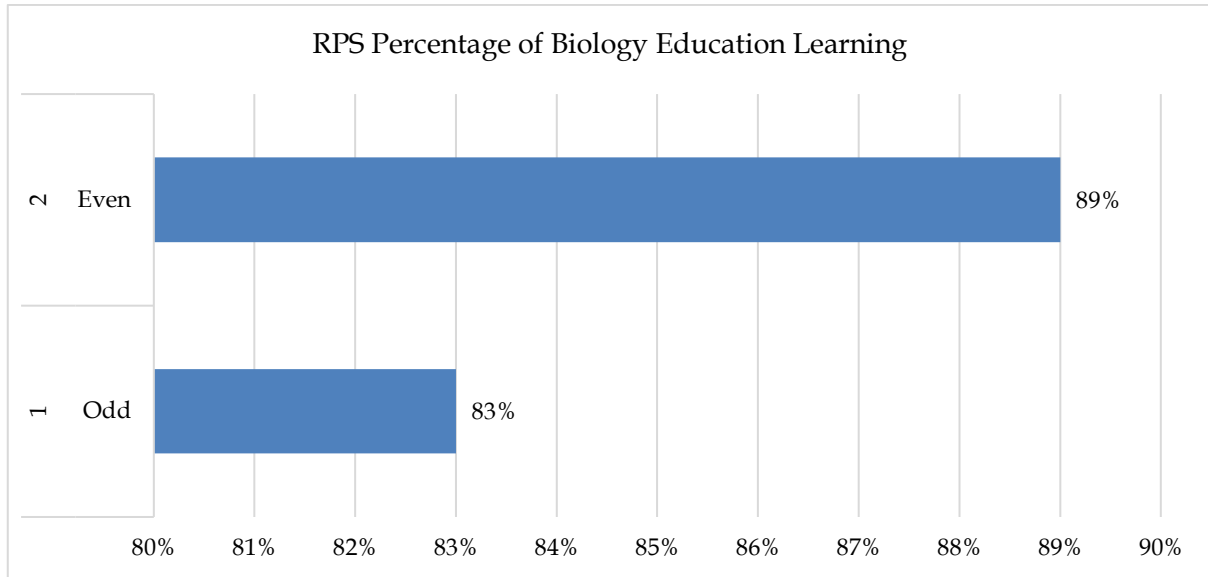

Figure 2. RPS percentage of biology education learning

Based on Figure 2, the results showed an increase in the achievement of the learning planning component of the biology education study program by 7% from the previous semester. This result exceeds the RPS IKU standard for biology education Study program that increases the RPS component of at least 5%. So, this result can exceed the standards that have been set Findings indicates that the evaluation using the QA was successfully carried out due to an increase.

Tabel 6. Enhancment RPS Standard

Set Standard by RPS IKU Standar of biology education at UIN Walisongo	Result in Field (2021)
An increase in the achievement of RPS components of at least 5% in academic year (2021)	Achievement of the learning planning component of the biology education study program by 7% from the previous semester in 2021

This result undergo enhancement which it is used ingredient meeting by biology study program to increase key performance indicator (IKU) and quality standard faculty because there is IKU agreement for each unit towards increasing standar every year to prepare IKU standard change next year . Accordance internal quality policy document that enhanchment is the increase in standards as a follow-up the results of RPS evaluation stage by checking, there is an increase with the previous implementation (Walisongo, 2020). According to research (Six, 2021) that feedback is a real effort from an evaluation, especially in education as an effort to monitor/check a program and the improvements that will be made and the impact

that will occur if things do not match what was planned. Feedback mechanism is very important for the development of study programs, especially in terms of learning. In accordance with the research objectives Suparno & Asmawati (2019) that the measurability of institutional performance needs to be assessed because as evidence of performance on achieving the quality of study programs such as lesson plan, implementation, assesment, maintaining the sustainability of a system, as design material in making subsequent programs. So it can be concluded that an increase in the achievement of the RPS component indicates that the lecturer has been able to design a lesson plan according to the curriculum and process standards of an institution. The benefits of preparing lesson plans for lecturers are in accordance with (Al Tabany, 2015) that is, lecturers can carry out lectures in a planned and systematic manner, lecturers can learning plan of good situations with students because there are preparations before one semester lectures begin, as a guide in implementing learning in one semester. This research   used the QA evaluation, namely the PPEPP (*Penetapan, Pelaksanaan, Evaluasi, Perbaikan, Peningkatan*) model, which is a systematic and measurable evaluation model that includes continuous improvement for the satisfaction of the academic community users (Berhard, 2012). Quality control assurance is done to fulfill Permendikbud Number 28 of 2016 concerning the System Quality Assurance of Elementary and Secondary Education mandate that each educational unit is required to establish SPMI with the aim of: (1) to control administration of education by education units in primary education and secondary education so as to materialize quality education, and (2) to ensure compliance standards in educational units systemically, holistically, and sustainable, so that a culture of quality grows and develops in an independent education unit. Therefore, system Education quality assurance is basically controlling educational unit in compliance with National Standards Education (Barnawi & M.Arifin, 2019)

Conclusion

The results showed an increase in the achievement of the learning planning component of the biology education study program by 7% from the previous semester. This result exceeds the RPS IKU standard for biology education Study program that increases the RPS component of at least 5%. So this result can exceed the standards that have been set Findings indicates that the evaluation using the QA was successfully carried out due to an increase. So, it can exceed the standards that have been set Findings indicates that the evaluation using the QA was successfully carried out due to an increase. This result undergo enhancement which it is used ingredient meeting by biology study program to increase key performance indicator (IKU) and quality standard faculty because there is IKU agreement for each unit towards increasing standar every year to prepare IKU standard change next year.

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