Implementation of the Juran Trilogy in Improving the Quality of Islamic Higher Education

*M. Shoffa Saifillah Al Faruq¹, M. Asep Fathur Rozi², Ahmad Sunoko³

¹Institut Agama Islam (IAI) Mamba’ul Ulum Jambi, Jl. Barebah II, Jambi, Indonesia
²Sekolah Tinggi Agama Islam (STAI) Muhammadiyah Tulungagung, Jl. Pahlawan Gg. III No.27, Tulungagung, East Java, Indonesia
³Madrasah Tsanawiyah (MTs) Al Anwar Sarang, Gondanrojo, Rembang, Central Java, Indonesia
*ahmadmuhammad593@gmail.com

ABSTRACT: This research aims to analyze and explore improving the quality of higher education by implementing the Juran Trilogy. This research uses qualitative descriptive methods to describe, record, analyze and interpret current conditions. Data collection techniques use interviews, observation and documentation. The data analysis used is interactive, data condensation, data presentation, and concluding/verification. The results of the study found that there are three main steps in improving the quality of education, namely quality planning, quality control and quality improvement. Implementation of quality planning by analyzing student needs, arranging activities and giving responsibility to lecturers or staff for each planned activity. Controlling the quality of education is carried out by maximizing the role of leaders as supervisors of activities in higher education prioritizing activities to monitor student development. Improving the quality of education is carried out by forming a special team to enhance the quality of education. Improving the quality of education is carried out by analyzing the needs of educational customers, maximizing the role of leaders in exercising control, and forming special teams to improve the quality of education.

**Keywords:** Quality Planning, Quality Control, Quality Improvement.

_Received: July 31, 2023; Revised: November 1, 2023; Accepted: January 21, 2024_

I. **INTRODUCTION**

Quality is a priority requirement that measures the success of an organization. Quality in one person's view is sometimes at odds with quality in the opinion of others. So, it is common when two experts have different conclusions about creating a good institution (Sallis, 2018). Quality is a structured process to enhance the output produced. Quality fosters an environment in which educators, parents, government officials, community leaders, and business leaders can collaborate to provide students with the resources they need to meet their current and future societal, business, and academic challenges. If the integrity of education is to be enhanced, then education professionals must take the lead (Zainal, 2016).

Efforts to develop the quality of education cannot be separated from its relation to the quality management of education. The management function in quality management is carried out by education managers in educational institutions (leaders) for customer satisfaction, especially external customers, such as students, parents or graduate users (Jaedun, 2011). The essential components in quality management include institutional quality, student and teaching staff quality, curriculum, infrastructure, funding, and the role of parents and the community. Aspects and indicators of management of educational institutions can be carried out and directed to a high quality so that the success of achieving this quality must be the integration of all the wishes and participation of stakeholders in achieving the final result (Teig & Nilsen, 2022; Yao et al., 2023).

Steps to improve the quality of education, according to (Minarti, 2012), are as follows: Meeting the needs of education customers (parents, community, students). Preparing community involvement in educational programs. Develop a system to measure improvements in the quality of education. System management (staff, educational staff, student needs) in placement. Make continuous efforts to produce better educational products.

Education is a service to improve human resources. In optimizing these services, it is necessary to improve internal and external quality (all stakeholders who use educational services) (Anand et al., 2023; Ikhwan, 2022). Generally, the quality of education is measured in terms of input, process, output and outcome. Several characteristics can be used as a basis for assessing the quality of education, namely performance, time, reliability, durability, beauty, human relations, ease of use, unique forms, specific standards, consistency, uniformity, ability to serve, accuracy (Ivankova et al., 2023; Ydesen, 2023).
Quality management is a means for education professionals to adapt to changes in the education system. The main difficulty faced by education professionals today is the inability to deal with a failing system, thus becoming a screen for these education professionals to develop or implement new educational processes that will improve the quality of education (Zainal, 2016). The transformation towards a quality educational institution begins with setting the vision and mission of the educational institution. The idea of quality is focused on meeting customer needs. This encourages the involvement of all education users in education quality development programs to manage change and continuous improvement by working hard to improve educational products (Arcaro, 2015).

The integrated quality movement in education is still relatively new. There needs to be more literature that contains references to this before the 1980’s. Universities in America have implemented several reorganizations of work practices with Total Quality Management (TQM). In the early 1990s, the TQM method was necessary and implemented in universities (Sallis, 2018). The paradigm in determining educational standards has several variations caused by differences in perceptions and points of view of each expert. Some education quality standards are defined in benchmarks based on the conditions of educational institutions, while others use models based on student achievement produced in the process of learning and teaching activities (Chiang et al., 2020; Jackman et al., 2024).

The quality standard of education is the integration of knowledge, faith, and charity by students towards becoming a complete human being. That is, the benchmark for educational quality standards is the attainment of output from students who have good academic ability or competence based on individual competence and have noble character as a skill for life (Mantai & Calma, 2022; Poling et al., 2022). Previous research has shown that the increase in the quality of education is not linked to the rise in the budget and the qualifications of educational staff but is embodied in a culture of quality. This requires a change in the way of thinking and a work culture that is quality-oriented. Thus, quality assurance has shifted from quality control practices to quality assurance and development.

Quality is the desire of customers, high quality is the key to a sense of pride in productivity levels and reflects the ability to produce. Quality goals are products and services that can provide satisfaction for its customers. Quality in education is not goods but services that meet the needs and desires of all parties, with the main focus being on students. The quality of education develops by the demands of educational outcomes related to the progress of science and technology, which is inherent in the form of developing the quality of human resources (Teig & Nilsen, 2022).

According to Juran, quality refers to the characteristics of a product that satisfy customer requirements and elicit customer satisfaction (Juran & Godfrey, 1998). In this sense, quality is defined in terms of income. The objective of this improved quality is to increase customer satisfaction and, one hopes, revenue. However, providing more and higher-quality features typically necessitates an investment and increases costs. In this context, higher quality typically costs more. Quality is the absence of defects, errors that necessitate revision or lead to field failures, customer dissatisfaction, customer claims, etc. In this sense, the meaning of quality is oriented to costs, and higher quality usually costs less.
Juran has a quality trilogy concept, which is one of the first concepts developed by him. Juran has devoted a lot of dedication to the field of quality management and has made an essential contribution to the development and progress of quality management, especially in the manufacturing industry. Quality Trilogy is a quality development model that identifies the third aspect of quality management, namely quality planning, quality control, and quality improvement. Based on the description above, the researcher wants to describe and explore the quality improvement of education carried out at IAI Mamba’ul Ulum Jambi through a quality management approach by Joseph M. Juran. Researchers will look at improving the quality of education using the components of the quality trilogy above.

Similar research on quality development or the Juran Trilogy mentions improving the quality of school facilities and infrastructure by applying the Juran Trilogy concept (Y. Fitria, 2021). More profound research reveals quality improvement planning, control, improvement, and quality improvement results at the school level (Burhanudin & Irawan, 2019). Furthermore, the Juran Trilogy is related to leadership styles, traits and principles, the result of which is that leadership traits have a significant and positive influence on the components of the Juran Trilogy. In contrast, leadership and duty ethics have a substantial and positive impact on quality (Wakefield, 2023). From several of these studies, no one has researched how to apply the Juran Trilogy in higher education, this is a new and unique finding in this research.

II. METHOD

This study uses descriptive qualitative to describe, record, analyze and interpret the conditions that are currently happening (Denzin & Lincoln, 2018). The research was conducted at IAI Mamba’ul Ulum Jambi, an Islamic higher education institution that applies the Juran Trilogy. Data sources were obtained from selected informants, field facts and related literature. Data collection techniques use interviews, observation and documentation. The data analysis used is interactive data analysis, which consists of three activities, namely data reduction, data presentation, and concluding/verification (Miles et al., 2014).
III. RESULT AND DISCUSSION

Based on the research results, it was found that in improving the quality of education, IAI Mamba’ul Ulum Jambi carried out quality planning, quality control and quality improvement. Details can be seen in the explanation below.

Quality Planning in Education

Schermerhorn defines planning as an application in achieving goals and the things that are done to achieve goals. Planning is an activity determined and carried out for the future to achieve goals. Planning is the process of determining the goals or objectives to be completed and determining the paths and resources to be used to achieve these goals as efficiently and effectively as possible (Loder-Jackson et al., 2023; Yusuf & Mardiana, 2020). Education quality planning is intended to prepare educational units and all components of education so that learning and teaching activities can run and achieve academic goals and objectives. The planning process is an effort to use and develop human resources, natural resources, and other resources to support education in achieving goals (Belabes et al., 2015; Ivankova et al., 2023).

Quality planning in the education system is design determination in determining policies, priorities, and costs of the education system with economic, political, cultural, and social considerations (N. Fitria, 2023; Sopwandin, 2022). The basic foundation of planning is the ability of humans to choose the alternative future they want and direct their efforts to realize the future so that it is adequately realised (Martínez-Jauregui et al., 2023; Russo et al., 2023). Research findings related to quality planning at IAI Mamba’ul Ulum Jambi, among others, conducting student needs analysis, providing the best service to students, arranging activities and giving responsibility to lecturers or staff for each planned activity.

Quality planning, as used here, is a structured procedure for developing products (both commodities and services) that ensures the final product satisfies consumer requirements (Juran & Godfrey, 1998). Student planning is the determination of activities carried out in the future. This activity is carried out to determine the actions to achieve the desired result (Sunardi et al., 2023). Planning is the utilisation of resources in an integrated manner that is expected to support activities and efforts that are carried out efficiently and effectively to achieve objectives (Berg & Lepp, 2023; Schnaider, 2023).

One part of higher education planning is student planning, which begins with the recruitment and acceptance of new students. Student planning concerns the admission of new students, graduation, drop out and transfer. Student planning relates to admissions activities and the process of recording or documentation personally for students. The first step is planning for students, which includes activities, analysis of student needs, student recruitment, selection, orientation, placement, recording and reporting (Hamiyah & Jauhar, 2015). Quality planning is the initial stage of educational institutions in planning students. To obtain quality planning, Juran provides 6 (six) steps which IAI Mamba’ul Ulum Jambi has implemented (Juran & Godfrey, 1998).

1. Establish the project

The first stage is to establish the project. That is, quality planning makes new products or updates old products necessary to achieve strategic goals. Implementation at IAI
Mamba'ul Ulum Jambi is to provide further services or improve services to students. This new service is expected to enhance the quality of education held at the institution.

2. Identify the customers

The second stage is identifying customers. Customer identification is the collection and recording of all customer evidence so that the institution can determine and equate the information with the customer. Implementation at IAI Mamba'ul Ulum Jambi is the identification of customer identity because, with this identity, we can know one customer by differentiating it from other customers. The customers in question are prospective students. Knowing customers in education planning can make planning more focused and directed.

3. Discover the customer’s needs

The third step of quality planning is finding customer needs. The main activities for finding compelling customer needs include identifying a list, analyzing and prioritizing customer needs, and translating customer requirements into part of the plan. Implementation at IAI Mamba'ul Ulum Jambi is to identify the conditions desired by prospective students and graduate users. Identifying student needs can be done by making observations at the time of admission of new students. Identification for customers or graduate users can be done by conducting surveys or conducting seminars by inviting graduate users.

4. Develop the product

Product development is a function that has been introduced previously for companies. Most businesses have a process for designing and launching a new product. This quality planning process focuses on the role of quality in product development and how to integrate it with industry-specific technical and design aspects. Product design is a creative process that relies on technological or functional knowledge. Historically, product designers were engineers, systems analysts, operations managers, and numerous other professionals. Implementation of product development at IAI Mamba'ul Ulum Jambi is a development carried out by educational institutions to create activities that can develop student creativity and intelligence potential.

5. Develop the process

Process development is a series of activities that define the means by which operating personnel will achieve product quality goals. For a process to be effective, it must be goal-oriented, with precise, measurable results; systematic, with a fully and clearly defined sequence of activities and tasks and all inputs and outputs fully defined; and capable, that is, capable of meeting product quality objectives under operating and lawful conditions, with apparent authority and accountability for its operations. Implementation at IAI Mamba'ul Ulum Jambi is to carry out activities to ensure students can achieve quality as planned. This activity can be in teaching and learning activities inside and outside the classroom.

6. Develop the controls and transfer them to operations

In this step, the agency develops controls for the process and coordinates all plans with all operational staff. It is the operational personnel staff who are responsible for producing goods or providing services and for ensuring that quality objectives are met promptly and accurately. They do this through a planned quality control system.
Controls are mainly geared towards continually achieving goals and preventing adverse product quality changes. Implementation at IAI Mamba'ul Ulum Jambi is the division of tasks in the planning that has been done. This division of functions is carried out to ensure that each stage in student management can run smoothly.

**Quality Control**

Quality control in quality management is a routine technical activity designed to evaluate and assess the quality of products or services provided to customers. Quality management requires control to ensure that activities adhere to predetermined plans and that the resulting products meet consumer expectations. Quality control tasks can be performed by measuring differences such as planning, designing, using appropriate procedures or equipment, verifying, and taking corrective action on things that deviate, including products, services or processes, outputs and specific standards.

Quality control is an endeavor to ensure that activities are carried out as planned and that output meets predetermined criteria, as stated by Partners: "Generally speaking, quality control is a system used to maintain a desirable level of quality in a product or service (Mitra, 2021). The primary objective of control is to minimise this harm, with prompt action to restore the status quo or improve the situation (Juran & Gryna, 1988). Quality control is a necessary instrument for achieving objectives. Control is therefore doing whatever is necessary to achieve the organization's objectives.

Juran defines Quality control as a universal managerial process for conducting operations in order to provide stability, prevent negative change, and "maintain the status quo." To maintain stability, the process of quality control evaluates performance, compares performance to objectives, and takes corrective action based on the difference (Juran & Godfrey, 1998). The leadership carries out the control role in tertiary institutions. Leaders in this case, have duties and functions as supervisors (Adina-Petuţa & Roxana, 2014; Krishnappa et al., 2022). The ability of leaders to manage educational institutions determines the quality of the institutions they lead.

Juran explained that quality control has seven stages that must be passed so that the process can run well. The seven stages are setup (startup) control, running control, product control, facilities control, concept of dominate, seriousness classification, and process capability. The following is the implementation of quality control at IAI Mamba'ul Ulum Jambi.

1. **Setup (startup) Control**

The first quality control stage is setup control, or the decision to initiate power. Implementation of setup control at IAI Mamba'ul Ulum Jambi is when the chancellor carries out management activities, from planning to supervision.

2. **Running Control**

Control execution is the second phase of quality control. This form of control occurs periodically during the process. The objective is to decide whether to continue or terminate the ongoing process, whether the process should continue to produce a product or cease. The performance of a function or product is evaluated and contrasted to its objectives. The implementation of running control at IAI Mamba'ul Ulum Jambi is when the leader performs his role and functions as a supervisor. Leaders exercise control over management, learning, or administrative control activities.
3. Product Control

Product control is the third phase. This control is implemented after a certain quantity of products have been manufactured. The purpose of management is to determine whether the effect produced is due to the planned quality of the product. The allocation of responsibility for these decisions varies from business to business. In all circumstances, however, decision-makers should be provided with the resources and training necessary to comprehend the planned product's quality, evaluate the actual product's quality, and determine conformity with the original plan.

Implementation of product control at IAI Mamba'ul Ulum Jambi is carried out in student recording and reporting. Recording and reporting of students is a form of control carried out by institutions on the quality of education. The institution conveys student development not only through existing study results cards but also through the state of scientific work produced.

4. Facilities Control

Facilities control is the fourth stage, which must be passed to create quality control within the company. Most of these processes use physical facilities, such as equipment, instruments, and tools. Today, there is a growing trend to use automated processes, computers and robots. This trend has made product quality increasingly dependent on facility maintenance. The implementation of facilities control at IAI Mamba'ul Ulum Jambi can be seen from the presence of exceptional staff who are assigned the task of being the coordinator of facilities and infrastructure. This role can be carried out by the Head of Administration, appointed to handle facilities and infrastructure. One of the tasks of the facility and infrastructure coordinator is to check the condition of existing facilities and infrastructure, as well as to procure goods.

5. Concept of Dominate

Juran identified that many variables influence the quality control process. One variable is sometimes more important than the other variables. Such a variable is said to be the dominant variable. Knowledge of the prevailing process variables assists planners in allocating resources and selecting priorities. The implementation of the concept of dominate at IAI Mamba'ul Ulum Jambi is to give priority to activities that directly intersect with student activities, both intra and extracurricular.

7. Seriousness Classification

Next is the classification of severity, which identifies vital control subjects. According to this concept, every product is divided into distinct categories, such as critical, central, and minor. This classification then guides planners in determining resources, priority assignment of tasks, facility selection, and monitoring and testing frequency.

8. Process Capability

Process capability is an essential concept in the quality planning process. Process capability is a person's capacity to conduct operational functions in quality control. All operating methods have inherent uniformity to produce a product. Frequently, this uniformity can be measured during the planning stage. The resultant information can be used by process planners to make decisions regarding process adequacy, selection of process alternatives, and the need for process revisions.
Quality Improvement

Quality improvement is maintaining an appropriate mechanism to produce quality and then developing it to achieve sustainable quality. In this regard, quality improvement includes allocating resources to support quality improvement, training educational units to be actively involved in quality projects, and establishing a permanent structure for seeking quality improvement and maintaining what has been achieved previously (Tuala, 2016).

Quality development entails the systematic introduction of positive change and the attainment of unprecedented levels of performance. Improvements in quality are a type of profitable change. This pertains to both kinds of quality, namely product characteristics and absence of flaws. Product features can increase customer satisfaction while being free from defects can create customer dissatisfaction and waste (Juran & Godfrey, 1998), enhancing quality to increase revenue may involve the following steps:

1. Product development to create new features that provide greater customer satisfaction and, therefore increase revenue
2. Business process improvement to reduce cycle time to provide better service to customers
3. Creation of "one-stop shopping" to reduce customer frustration of having to deal with multiple personnel to obtain service

Improving the quality of education starts with improving educational planning. This process is not only the responsibility of higher education leaders but all educators and academic staff have the same responsibility to carry out quality improvements. The quality improvement process is based on the basic concepts that have been planned. For most educational institutions, quality improvement is not a new task, and it is also a change in the existing management of education in these institutions. According to Juran, the stages in improving quality include (Godfrey & Kenett, 2007; Juran & Godfrey, 1998):

1. Prove the need

Proving the need is the first order in quality improvement initiated by Juran. This was Juran's first step in creating organized change. The stage is an organized sequence of actions to produce a structured cause-and-effect relationship. Prove the need is the previous order, which is the reason needed to complete the cycle.

2. Establish the infrastructure

The infrastructure includes tools for project planning and selection, drafting mission statements, designating team leaders and members, training teams and facilitators, reporting progress, etc. Such a lack of infrastructure causes quality improvement to only occur in certain parts, not all sectors. Infrastructure will be the foundation for the success of each planned program and produce output owned by the institution. Even though the institution has the results of innovative teamwork and each staff has high creativity, if the infrastructure needs to be prepared correctly, the result will only be a prototype worth selling.

3. Identify the improvement projects

An essential step in the roadmap towards improvement projects is carefully selecting topics and goals. Information from various monitoring data, as well as individual events
and experiences, is used by the quality improvement team leader to identify any quality and safety gaps that occur. The appointed team must use a formal and explicit process to select the best project within limited resources. Priority should be given to projects that address quality gaps of magnitude and impact, have a high likelihood of success, are appropriate to the unit's readiness for change, have organizational support and align with corporate priorities (Katakam & Suresh, 2017).

4. Establish project teams

A special team is assigned to carry out the plans that have been made. This team is then responsible for finalizing the implementation of the program. (Juran & Godfrey, 1998). Building a team requires rules for selecting people and forming them into well-functioning groups. There are five steps in creating a team, namely selecting your team, setting the tone and the ground rules, setting clear goals, achievable early goals, and communication (Zunairoh et al., 2023).

5. Provide the teams with resources, training, and motivation

Teams that have been formed are equipped with training and given the motivation to improve their respective performance capabilities. The training and encouragement aim to ensure that quality improvement goes according to plan. Apart from being given reason and training, the team has facilities and infrastructure for their duties. Every company which has been actively carrying out quality improvement knows the importance of education and training. Training for the team is carried out to provide the knowledge, skills and resources needed to realize the plan.

6. Establish controls to hold the gains

The last step is to build controls to hold profits or, in other languages, to build rules to maintain quality. Establishing control to support this quality is intended so that the existing rate does not decrease. This is done through process feedback of actual performance evaluation, comparing results to standards, and taking action on discrepancies in results with planning.

IV. CONCLUSION

Based on the discussion above, the researcher concludes that to improve the quality of education, IAI Mamba’ul Ulum Jambi takes three main steps, namely quality planning, quality control, and quality improvement. To carry out quality planning, IAI Mamba’ul Ulum Jambi analyses student needs, provides the best service to students, organizes activities and assigns responsibility to lecturers or staff for each planned activity. Quality control of education is carried out by maximizing the leadership’s role as supervisor of activities in tertiary institutions, giving special assignments or authority to lecturers or employees in managing facilities and infrastructure, and prioritizing monitoring activities on student development. Improving the quality of education at IAI Mamba’ul Ulum Jambi is carried out by forming a special team to enhance the quality of education. This team is in charge of making a roadmap for the development of higher education institutions, planning and providing evaluation of the development of higher education institutions.
V. REFERENCES


Implementation of the Juran Trilogy in Improving the Quality... – M. Shoffa Saitillah Al Faruq, et al. 180

DOI: https://doi.org/10.35723/ajie.v8i1.420


DOI: https://doi.org/10.35723/ajie.v8i1.420