

International Journal of Learning, Teaching and Educational Research
Vol. 22, No. 4, pp. 414-433, April 2023
<https://doi.org/10.26803/ijlter.22.4.23>
Received Feb 14, 2023; Revised Apr 16, 2023; Accepted May 3, 2023

Implementing an Internal Quality Assurance System to Enhance Elementary School Education Quality

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Abstract. An education quality assurance system is intended to enhance education quality and establish a quality culture in schools; however, some elementary schools in Indonesia still struggle with its implementation. Hence, this research aimed to suggest action steps as an option to enhance the implementation of the education quality assurance system in elementary schools. This research employed an action research design to investigate this issue and identify alternative solutions. The data were collected using a survey and semi-structured interviews with staff at one private elementary school in East Kalimantan province, namely a school principal, 31 teachers and two school foundation administrators. The findings produced nine action steps: 1) Building management commitment, 2) Setting up a quality improvement team, 3) Engaging in communication and socialization, 4) Building quality awareness, 5) Forming a quality control circle, 6) Mapping quality education, 7) Preparing a mapping instrument, 8) Collecting mapping data, and 9) Processing and analyzing mapping data. This research concludes that new school quality standards improved every year on being compared with eight points on the national education standards, and the national examination results exceeded the average national examination score at the provincial level. The increase in the average values of Standard 1–8 ranged from 0.6 to 1.5. In other words, these nine steps had an impact on obtaining school accreditation with a superior rating.

Keywords: internal quality; assurance system; elementary schools; education policy; action research

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1. Introduction

In the past decade, one of the strategic efforts of countries to enhance education quality at the elementary, middle and higher levels has been to implement quality assurance systems (Kadhila & Iipumbu, 2019; Podgornik & Vogrinc, 2017). Policies on quality assurance for education in Indonesia at the levels of primary and secondary education are regulated by the Minister of Education Regulation No. 28 of 2016, which aims to ensure that the entire process of education provision is in line with national education quality standards (Pannen, 2021; Sampul et al., 2020; Susilana & Asra, 2018). However, many Indonesian elementary schools have not fully implemented policies for quality assessment and assurance through self and external evaluation.

Quality classification of elementary school education according to the National Education Standards (SNP, *Standar Nasional Pendidikan*) in Indonesia was conducted by Harwanti and Rumiati (2021); the exercise involved 142,294 (100%) elementary schools in Indonesia, and it was found that a total of 63,477 schools (45%) were included in SNP. Another 44,680 (31%) elementary schools fell in the satisfactory category for meeting the SNP, 31,487 (22%) elementary schools did not fully meet the SNP, and 2,650 (2%) elementary schools did not meet the SNP. Harwanti and Rumiati used their findings to do city clustering by ranking. Clusters A, B, and C are schools that meet the SNP, schools that satisfactorily meet the SNP and schools that do not meet the SNP respectively. Schools in Clusters B and C are mostly located on Kalimantan Island of Indonesia (Figure 1).

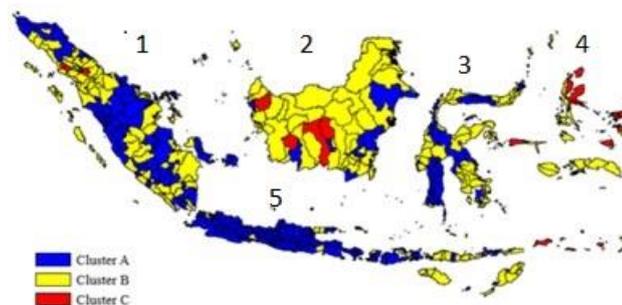


Figure 1: City Cluster Visualization (Harwanti & Rumiati, 2021)

Note. Islands numbered as follows: 1. Sumatra; 2. Kalimantan; 3. Sulawesi; 4. Maluku; 5. Java

Figure 1 shows that Kalimantan island is dominated by Cluster B and C schools. Thus, schools located there need special attention to encourage the implementation of a quality assurance system. Gvaramadze (2008), Hillman and Baydoun (2019), Silaeva and Semenov (2018) affirm that a quality assurance system can enhance education quality and build a quality culture in education institutions. Hence, an in-depth investigation is needed into the implementation of the Regulation of Minister of Education and Culture No. 26 of 2016 in elementary schools, and to formulate action steps to enhance the quality of elementary schools on Kalimantan Island.

Noda et al. (2021) applied Elken and Stensaker's (2018) theoretical framework to internal quality assurance (IQA) in Japanese and Taiwanese universities,

highlighting the importance of a quality assurance system for achieving learning outcomes. Podgornik and Vogrinc (2017) studied quality assurance in Slovenian schools and found that self-evaluation was given more weight by the school than external evaluation was, with the majority of education professionals recognizing the importance of self-evaluation for their profession. The attitudes of school principals, teachers, and school counsellors towards self-evaluation, school climate, research, and professional development strongly influence the implementation of self-evaluation policies.

Rahmania et al. (2020) explored the implementation of the IQA system (SPMI, *Sistem Penjaminan Mutu Internal*) at SMP Negeri 21 Malang, Indonesia, to improve the education quality carried out during the 2016–2019 period. They identified five stages for implementing a quality assurance system in schools: (1) quality mapping, (2) quality fulfillment planning, (3) implementation of quality fulfillment, (4) evaluation, and (5) standard setting, which lead to improved learning outcomes and contributed to the school's culture and character. This implementation resulted in the school being ranked fourth in the 2019 Computer-Based National Examination, which positively impacted the quality of graduates.

This research aimed to formulate action steps for implementing an IQA system in elementary schools – a topic that has not been explored in previous studies. The research question focuses on the steps necessary to enhance education quality through this system. We propose nine steps, based on the 14 Steps of Quality Improvement Program initiated by Philip Crosby (1979). This research contributes to the formulation of effective efforts and strategic steps for improving an IQA system. These steps can be replicated by institutions, both in Indonesia and in other countries with similar problems.

2. Literature Review

2.1. Quality Assurance as Culture

Quality assurance is an activity that consists of quality monitoring, evaluation, or review (Gambescia & Early, 2017). Quality assurance activities concentrate on processes that foster trust by ensuring that minimum requirements or standards are met, whether input, processes, or results as expected by stakeholders (Ingvarson & Rowley, 2017; Sumsion et al., 2018). In the education field, assurance is a way of managing all educational activities and resources with the aim of achieving customer satisfaction (Anwar, 2018; Ijah et al., 2021; Mahmud, 2012; Widodo et al., 2020).

Quality culture (QC) is a tool that promotes organizational quality by establishing a culture of quality in all activities, and it is closely related to other elements of organizational culture. According to Jensen et al. (2006), QC consists of two components: (1) A shared set of values, beliefs, expectations, and commitment to achieve excellence, which refers to understanding, perception, participation, expectations, and emotions; and (2) Established structure and management factors for improving the quality of implementation and coordination efforts, which refer to individual and collective duties and responsibilities. Therefore, QC is an organizational value system that aims to foster a conducive environment for building and enhancing quality in a

sustainable manner (Harvey, 2006; Legemaate et al., 2021; Rahnuma, 2020). In the context of education, QC involves values, beliefs, and practices, and aims to improve the quality of education provided, which can be done by focusing on student learning outcomes, encouraging active involvement of staff in lifelong learning, and having a strong evaluation system.

2.2. Internal Quality Assurance

In primary and secondary education in Indonesia, the implementation of education quality assurance is carried out by internal and external parties (Menteri Pendidikan, 2016). SPMI is a set of policies and processes that are used by elementary and secondary education units to ensure that quality education meets or exceeds SNP, while external quality refers to policies and processes used for accreditation to evaluate the feasibility and quality achievement levels of these units. SNP sets minimum criteria for the education system in all jurisdictions of the Republic of Indonesia (Menteri Pendidikan, 2016).

Based on the above explanation, IQA is basically a self-assessment of the overall quality of educational institution activities (Do et al., 2020). Self-assessment is essential for an IQA system, as it provides comprehensive information about all education institution activities (Batool & Qureshi, 2007; Buzdar & Jalal, 2019; Jalal et al., 2017; Jawad et al., 2015). Furthermore, through IQA activities, self-assessment provides a fairly comprehensive assessment of the activities of education institutions. Thus, IQA demands transparency, accountability, the right strategy, and the ability to determine the scope of a person's capacity in all activities throughout the institution (Julia et al., 2020; Karkoszka, 2009; Matsebatlela, 2015; Mohamedbhai, 2006). IQA activities ensure and improve the quality and accountability of processes in educational institutions. In contrast, external quality assurance (EQA) involves an external entity, such as a quality assurance agency or another organization that is independent of the institution, and which evaluates the organization's performance or that of its program to verify whether it meets the established standards (Banji, 2011). In other words, IQA is conducted by schools as part of their evaluation efforts, or for reflection on education implementation, while external quality assurance involves an authorized, state-appointed party to monitor or assess schools.

2.3. Impact of Internal Quality Assurance

Studies have shown the positive impacts of quality assurance activities on the development of structural and organizational processes and procedures. These studies have resulted in a new monitoring system and data handling activities for education performance and quality (Nguyen, 2018; Stensaker et al., 2011; Westerheijden et al., 2007). Academic work rationalization and clarity can increase stability and transparency in education institutions. (Cardoso et al., 2013; Huusko & Ursin, 2010; Skidmore et al., 2018). A study by Elbadiansyah and Masyni (2021) reveals that IQA can determine how education institutions conduct internal quality audits, assess learning processes, monitor student loads and learning, and assess SOP (standard operating procedures) for semester plans, lesson plans, and lecture schedules.

However, several studies mention the potential of quality assurance reducing academic freedom (Biggs, 2001; Cartwright, 2007; Harvey, 2006; Hoecht, 2006; Newton, 2000, 2002; Watty, 2006). Huusko and Ursin (2010) state that, instead of clarifying work practices, quality assurance systems can easily increase bureaucracy. Studies suggest that bureaucracy, standardization, and control can be detrimental to teaching and learning processes, as they divert educators from crucial issues, such as learning (Legemaate et al., 2021; Rahnuma, 2020; Tavares et al., 2017). According to Hoecht (2006), administrative work might cause quality improvement activities, such as teaching preparation, to be sacrificed. However, Watty (2006) claims that these issues have no impact on teaching and learning.

3. Method

3.1. Research Design and Collaboration

To attain the research objectives, and considering the nature of the study, that is, a self-reflection question aiming to investigate practical problems and to develop solutions, action research was chosen as the design for this research (Creswell, 2012). This research design is in line with the research aims, namely to find solutions for improving education quality in elementary schools through quality assurance implementation. In addition, this design has been widely used to solve problems in the education context (Abdussalam et al., 2021; Jefferson, 2014; Kaye et al., 2021; Netcoh et al., 2017; Supriadi et al., 2022), which is also characterized by collaboration (Bleicher, 2014; O'Siochru et al., 2021; Somekh, 2010).

To establish collaboration, Heil's (2005) method was used: We asked what was needed and who had interest in this project. The research was conducted from February 2020 to December 2022 through both physical visits and virtual methods (e-mail, WhatsApp and phone calls), which gave ample time to collect data from various sources and analyze it for publication.

3.2. Participants and Site

The research was conducted at a private school in East Kalimantan, Indonesia, involving one elementary school, a principal, 31 teachers and two administrators of foundation, who manage the school. This school was selected because it was included in either Cluster C or B, as referred to by Harwanti and Rumiati (2021) (see Figure 2).



Figure 2. Research Site

3.3. Research Procedure

Before conducting the research, we obtained approval from institutional and school authorities, and provided information to participants about the objectives and procedures of the study, and potential risks and benefits of participating. The research was carried out in three stages: pre-action, action implementation, and evaluation. During the pre-action stage, we analyzed the implementation of IQA in an elementary school through surveys and interviews. In the action implementation stage, we designed and implemented nine action steps to improve education quality. Finally, we evaluated the research activities to compare the initial and final conditions.

3.4. Research Instrument

To measure the education quality at the school, this research used a set of eight education standards, based on regulations by the minister of Education and Culture of the Republic of Indonesia, as presented in Table 1.

Table 1: National Education Standard

STANDARD	National Score	INDICATORS
1. Graduate Competence Standard (Regulation of Ministry of Education and Culture No. 54 of 2013)	5.5	1. Having behavior that reflects the attitude of people of faith, noble, knowledgeable, confident, and responsible in interacting effectively with the social and natural environment according to the scope of education level. 2. Having factual, conceptual and/or procedural knowledge and also metacognitive knowledge about science, technology, art and culture in the perspective of humanity, nationality, statehood and civilization related to phenomena and events according to the scope of education level. 3. Having the ability to think and act productively and creatively in abstract and concrete realms as expected at every level of education.
2. Content Standard (Regulation of Ministry of Education and Culture No. 64, 67-70 of 2013 & No. 61 of 2014)	5.2	1. Content in accordance with the design of the national curriculum. 2. The design of the subjects and the study load provide sufficient free time to develop various attitudes, knowledge and skills. 3. School-based curriculum (KTSP, <i>Kurikulum Tingkat Satuan Pendidikan</i>) compiled by education units in accordance with the national curriculum.
3. Process Standard (Regulation of Ministry of Education and Culture No. 65 of 2013)	6.0	1. Learning encourages students to find out. 2. Learning based on various learning resources. 3. Learning as a process to strengthen the use of a scientific approach 4. Competency-based learning.

STANDARD	National Score	INDICATORS
		5. Integrated learning. 6. Learning with answers whose truth is multi-dimensional. 7. Learning towards acquiring applied skills. 8. Improvement and balance between physical skills (hard skills) and mental skills (soft skills). 9. Learning that prioritizes cultivating and empowering students as lifelong learners. 10. Learning that takes place at home, in schools, and in the community. 11. Learning that applies the principle that anyone is an educator, anyone is a student, and anywhere is a class. 12. Utilization of information and communication technology to increase the efficiency and effectiveness of learning. 13. Recognition of individual differences and cultural background of learners. 14. Learning plans are prepared in accordance with the KTSP
4. Assessment Standard (Regulation of Ministry of Education and Culture No. 66 of 2013)	5.8	1. Valid, objective, open, authentic, systematic, accountable and educative assessment process. 2. The education unit applies authentic assessment. 3. The form of the assessment document is in accordance with the applicable regulations.
5. Teacher and Staff Standard (Regulation of Ministry of Education and Culture No. 13, 16 of 2007, 24–26 of 2008)	4.0	1. Number and qualifications of educators according to standards. 2. Qualification of the head of the education unit according to the Standards. 3. Availability of the head of administrative staff. 4. Availability of administrative affairs. 5. Availability of library heads. 6. Availability of library implementing staff. 7. Availability of the laboratory head. 8. Availability of laboratory implementing technicians. 9. Availability of laboratory assistants. 10. Competence of the head of education unit according to Standards 11. Competence of the head of administrative personnel according to Standards. 12. Competence for implementing administrative affairs according to Standards. 13. Competence of the head of the school library according to the Standards.

STANDARD	National Score	INDICATORS
		14. Competence of school library staff according to Standards 15. Laboratory technician competencies according to standards 16. Laboratory competence according to Standards.
6. Facilities and Infrastructure Standard (Regulation of Ministry of Education and Culture No. 24 of 2007)	4.0	1. The capacity of the education unit is in accordance with the Standards. 2. Number and condition of educational facilities and infrastructure according to the Standards.
7. Management Standard (Regulation of Ministry of Education and Culture No. 19 of 2007)	5.2	1. Program planning is carried out in accordance with Standards and involves stakeholders. 2. The implementation of the program is carried out in accordance with Standards and involves stakeholders. 3. The education unit carries out supervision and evaluation of the implementation of the program regularly. 4. Head of educational unit performs well. 5. Education unit that manages information systems.
8. Financing Standard (Regulation of Ministry of Education and Culture No. 69 of 2009)	5.4	1. Minimum non-personnel operational costs according to standards (total education unit budget minus investment costs and salaries of educators and education personnel divided by the total number of students). 2. Management of funds for education units is carried out in a transparent and accountable manner (reports, accessible and auditable).
Mean	5.14	

In Table 1, the national score is the minimum average score each standard must achieve for each education unit. The instrument used in this research to assess each indicator was validated through focus group discussions with two education management experts and one education administrator. The assessment used a scale of 1-7, with the standard score indicating how well schools meet SNP.

3.5. Data Collection and Data Analysis

Data were collected in stages. Initially, a survey was conducted to gather information on participants' insights and experiences, by using a Google Forms survey as recommended by Mahmudi (2018) and Simanjuntak & Limbong (2018). The Google Forms survey was disseminated by colleagues who had access to participants through several WhatsApp groups (Cruz & Harindranath, 2020; Nitza & Roman, 2016). The second stage involved in-depth semi-structured

interviews to investigate the survey results. The data were analyzed thematically, coded, evaluated, categorized, and analyzed using NVivo 12 Plus software. The findings of the analysis were discussed and crosschecked by experts.

4. Findings

4.1. Pre-Action Analysis

At this stage, we conducted a survey of 34 participants (one school principal, 31 teachers, and two staff of school foundations). Participant responses involved their assessment of the eight standards on a Likert scale, based on their perceptions. These eight standards were used to measure school performance of each school in every education unit. Table 2 presents the survey results.

Table 2: Frequencies for Survey Results of the Eight Education Standards

Standard	Responses on a Likert scale				
	1	2	3	4	5
1. Graduate Competence Standard				32	2
2. Content Standard				30	4
3. Process Standard				34	
4. Assessment Standard			6	28	
5. Teacher and Staff Standard			5	29	
6. Facility and Infrastructure Standard			19	15	
7. Management Standard			12	22	
8. Finance Standard			15	19	

Note 1: Does not meet SNP; 2: Does not fulfil the SNP yet; 3: Uncertain whether it meets SNP; 4: Meets the SNP; 5: Exceeds the SNP

Table 2 above reports that 32 (94.12%) participants stated that the graduate competency standards met national standards, while 2 (5.88%) said that the school involved in this study exceeded the standards. UN results, final exam reports and teacher assessment were used to assess the graduate competency standard. A total of 30 (88.23%) participants stated that the content standards met national standards and 4 (11.76%) participants stated that the result exceeded the standards. Regarding the process standard, 34 (100%) participants stated that they met the national standard. Regarding assessment, 6 (17.64%) participants stated that they doubted whether they met the standards and 28 (82.35%) participants stated that they met the standards. For the teacher and staff standard, 5 participants said they doubted that they met the standards and 29 participants said they met the standards. Regarding the facilities and infrastructure standard, 19 (55.9%) participants said they doubted they met the standard and 15 participants said they met the standard. In terms of management standards, 12 participants said they doubted that they met national standards and 22 participants said they met national standards, and for financing standards, 15 participants said they doubted they met standards and 19 participants said they met standards. After the answers had been analyzed, three standards that were believed to meet SNP had been identified, as were five standards that participants believed they met or were doubtful about.

To follow up, we interviewed a school principal and two school personnel who served as the quality assurance team in a semi-structured manner at a separate time and different space. We asked them, "What makes you sure that Standards

1 to 3 meet national standards?" Participant 1 answered *"This can be seen from the average national standard final exam results where every year students got scores above the average national standard exam scores."* Participant 2 answered, *"The results of our analysis of student national exam results increased every year and the scores were above average."* Participant 3 answered, *"This is evidenced by our school's national final exam score that reached 100% graduation rate and the scores obtained by students were above the national average score."*

On standards on which participants were uncertain whether they were met, we asked, *"What makes you doubt that some of the standards meet the national standards?"* Participant 1 answered, *"Some facilities were not yet supported."* Participant 2 stated, *"There are several teachers whose education are not linear,"* while Participant 3 stated, *"Inadequate class capacity."* The results of the survey and interview indicates that there were several indicators among the eight standards that did not meet the SNP. However, these statements need follow-up evidence.

An extensive school investigation was conducted by verifying data on eight SNP, as shown in Table 1. The results show that: (1) In three indicators of Standard 1, the mean was 5.2, while the national score was 5.5; (2) In three indicators of Standard 2, the mean was 5.3, while the national score was 5.2; (3) In 14 indicators of Standard 3, the mean was 5.7, while the national score was 6; (4) In three indicators of Standard 4, the mean was 5.7, while the national score was 6; (5) In 16 indicators of Standard 5, the mean was 3.1, while the national score was 4; (6) In 2 indicators of Standard 6 the mean was 3.5, while the national score was 4; (7) In five indicators of Standard 7, the mean was 4.2, while the national score was 5.2; and (8) In two indicators of Standard 8, the mean was 4.5, while the national score was 5.4. Findings on Standards 1 and 2 indicate they meet SNP, while Standards 3 to 8 still do not meet national standards – this is indicated by the mean score of each standard, which is still below the national score. Overall, the mean score was below the national average, and there were specific areas that needed to be maintained and improved.

From the pre-action analysis, four mapping documents were obtained. The first document is the average scores of the national exam, which tended to fluctuate. The national exam score in 2015 was 8.59, in 2016 it was 8.7, in 2017 it was 8.52, in 2018 it was 8.2, and in 2019 it was 8.3. To compare, the two accreditation assessment data in 2003, 2011 and 2013 achieved good results, even though not every teacher in the school was fully certified. Of the 31 teachers, only 14 (45%) had obtained certification.

4.2. Action Implementation

Based on the results of the pre-action evaluation that was carried out, nine steps were formulated for implementing a quality assurance system to achieve the national standards for schools. The nine steps are as follows.

Step 1: Building Management Commitment

In this step, the school management developed a policy based on the school foundation's leadership on SPMI implementation, formed a school management team, and signed a "joint commitment pact" to execute the SPMI program through the establishment of a quality assurance agency (BPM, *Badan Penjamin*

Mutu) under school foundation management. This resulted in policy documents and job descriptions for each management member, who had a complete understanding of and strong commitment to enhancing school quality assurance.

Step 2: Setting up a Quality Improvement Team

In this step, we suggested that the school foundation create a quality improvement team consisting of a quality assurance manager and a quality assurance agency to implement SPMI in schools. The BPM team was formed to control the process professionally, with designated coaching and mentoring responsibilities. This resulted in the development of a SOP document (POB, *Prosedur Operasional Baku*) that outlined the flow of the IQA system.

Step 3: Communication and Socialization

To implement a new concept, communication and socialization are important. Schools created communication forums, social media groups and SPMI manual booklets, and held workshops, quality control group (GKM, *Gugus Kendali Mutu*) discussions, weekly leadership meetings, and parent–student meetings, and did visual promotions using banners to facilitate the communication and socialization processes, and which were facilitated by school administrators, effectively.

Step 4: Building Quality Awareness

The main objective of implementing SPMI is to build a quality culture and to make quality part of the school. SPMI was implemented to build a quality culture and promote quality as a part of the school. Strategies included creating social media groups, conducting workshops, and holding regular GKM discussions to raise the awareness of management and other employees. These steps helped educators and other staff to adapt to the programs being implemented.

Step 5: Forming a Quality Control Circle

To implement SPMI in schools, forming a Quality Assurance Group (GKM, *Gugus Kendali Mutu*) is important. In this study, nine GKMs were formed focusing on a specific program. This increased participation and motivation of all school elements, and formed a culture in each cluster to provide the best results.

Step 6: Mapping Quality Education

Mapping education quality involves data collection and analysis to evaluate and understand the quality of education in a region or institution, and is used to inform decision-making and develop appropriate strategies. Important factors to consider in this process include the availability and quality of educational facilities, teaching quality, students' academic performance, the effectiveness of evaluation and monitoring systems, and the quality of professional development programs for teachers and education support staff.

Step 7: Preparing Mapping Instruments

The instruments used to map education quality should consider obtaining physical evidence. Schools and BPM developed instruments covering all standards and indicators per SNP, which were developed into indicators with

reference to literature. Doing so makes the mapping process easier and ensures all involved components have a clear understanding, to direct decision-making.

Step 8: Collecting Mapping Data

Systematic data collection is crucial in mapping education quality, and various sources are prioritized, such as teaching and learning documents, assessment data, evaluations from education committees, unit head assessments, and feedback from parents and students. The approach to data collection depends on the instrument used, to ensure a controlled, sustainable, and productive mapping process.

Step 9: Processing and Analyzing Mapping Data

The data that was collected as evidence were analyzed to compare the current education quality with the SNP. Questions were developed based on the standard indicators in the instrument, to draw conclusions about the education quality mapping. The analysis presented strengths, weaknesses, opportunities and threats faced by education units according to the mapping focus indicators.

4.3. Post-Action Analysis

The nine steps that were implemented resulted in significant improvements in national exam results, accreditation scores, teacher certification, and school self-evaluation from 2020 to 2022. The school was graded as superior, with 18 out of 31 teachers (58%) being certified (Figure 3).

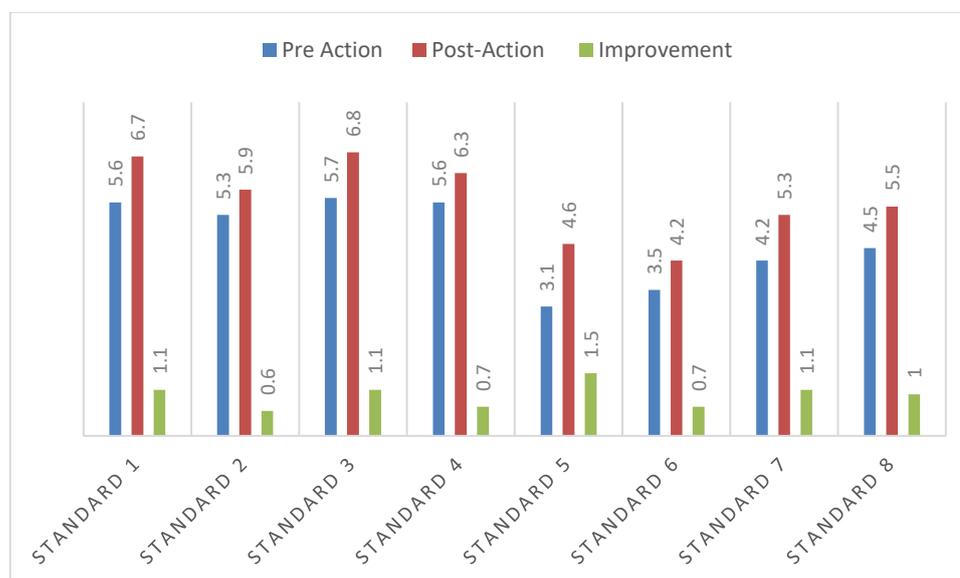


Figure 3: Achievement of Improvement in Each Standard

Figure 3 shows that there was an increase in the achievement of all standards. Assessment of compliance to each standard after implementing the nine action steps showed that the school involved in this study achieved the SNP.

5. Discussion

The nine quality improvement steps proposed proved to be an effective strategy for enhancing the education quality assurance in a selected school in Kalimantan

Island, Indonesia. The proposed nine steps were a simplification of the 14 steps of a quality improvement program initiated by Philip Crosby (1979). Three school commitments, namely (1) establishing a school foundation trustee policy; (2) school reorganization; and (3) signing a joint commitment pact, were followed up rigorously through regular management meetings, where this commitment was renewed and refreshed, to keep it up to date. These commitments are closely related to the concept of total quality management (TQM) (Jasti et al., 2022; Nogueiro et al., 2022; Olaguer & Bertillo, 2023). TQM requires long-term commitment by senior management, but it can also be a potential obstacle to its implementation (Sallis, 2014). Commitment is crucial for implementing TQM, as it involves all members of the organization in a continuous improvement process. In schools, all members must commit to improving service and learning quality, and collaborate to achieve common goals (Oakland et al., 2020). Periodic evaluations of teacher and student performance can identify potential problems and provide appropriate solutions for TQM implementation in schools.

The quality assurance team formed by elementary schools needs to be fully empowered to work effectively. The head of BPM and the team need to complete their previous tasks immediately to focus on the SPMI implementation program and education quality mapping. This is the second step of Crosby's quality improvement program, namely building a quality improvement team on the basis of commitment (Crosby, 1979). By applying the TQM concept and strengthening school commitment, schools can improve the quality of services and learning, improve management efficiency and effectiveness, and increase the satisfaction of all school members. This can have a positive impact on student achievement and the overall reputation of the school (Bastas & Liyanage, 2018; Oakland et al., 2020). Considering that every function in the organization has the potential to be a contributor to quality, but also has the potential to damage quality and cause failure, every part of the organization must participate in quality improvement efforts. The quality improvement team has the task of organizing and directing programs to be implemented throughout the organization. This team does not do all the quality-related work, since the task is a joint responsibility of all elements in each department. Regular meetings are a crucial aspect of enhancing quality awareness at schools, as they promote coordination, understanding of school goals and vision, quality of teaching, and communication with parents and students, and facilitate information sharing, feedback, and issue resolution among staff and teachers (Alauddin & Yamada, 2019; Mukhopadhyay, 2020). Similarly, Cardoso et al. (2019), Hou et al. (2018), Li (2023) and Stalmeijer et al. (2016) refer to the importance of a quality assurance team in school management, which can be done by consistently adopting good quality standards, monitoring the efficiency and effectiveness of school management, and implementing a data-driven management system.

Communication and socialization activities carried out by schools for SPMI implementation are adequate, but need improvement through training and recognition, considering its fundamental role in the implementation process. Furthermore, to build quality awareness, the elementary school in this research carried out six activities. Building quality awareness is the fifth step in Crosby's path to quality (Anastasiadou, 2015; Crosby, 1979; Jasti et al., 2022). To implement

the quality improvement team's program, regular meetings between management and employees are necessary, which requires school leadership to raise awareness and discuss and resolve specific issues. Management's commitment to being a leader in education can strengthen and improve the school's position, build trust and support from stakeholders, and help achieve long-term goals (Huseyin, 2018; Liu & Watson, 2020) and a constant sequence of events (Crosby, 1979).

GKM formation intends to enhance participation and motivation of school elements in SPMI implementation, with each GKM submitting a program proposal for the quality improvement program. The GKM concept originates from the concept of total quality control (integrated quality control) (Chakraborty & Tan, 2012; Chukwulozie et al., 2018; Smith, 2011). GKM supervises and controls the quality of processes and products, and can also improve education services and community participation by identifying problems and developing effective strategies. GKM makes better use of all the assets owned by companies/agencies, especially its human resources, to improve quality in a broad sense. The specific benefits that can be obtained are increasing customer satisfaction, and enhancing the effectiveness and efficiency of school management (Ijah et al., 2021; Seyfried & Pohlenz, 2018). By understanding the needs and expectations of the community, organizations or institutions can design programs or activities that are more relevant and effective in increasing community participation (Alauddin & Yamada, 2019; Ijah et al., 2021; Mukhopadhyay, 2020).

The mapping instrument prepared by the school in this study was indicated as complete and in accordance with the *Guidelines for Implementing Quality Assurance* of the Education Unit issued by Dikdasmen Kemendikbud (2016a, p. 41-54) and the *Toolkit of Mapping Quality of Elementary and Secondary Education* issued by Dikdasmen Kemendikbud (2016b). The success of these guidelines is based on three indicators: outcome (the ability of the education unit to carry out the entire quality assurance cycle and the existence of an education quality assurance organization in the education unit), result indicators (whether the learning process and the management of the education unit are running according to standards), and impact indicators (the establishment of a culture of quality in the education unit, as well as an increase in the quality of learning outcomes) (Raharjo et al., 2019).

Lastly, the data processing of school self-evaluation (EDS, *Evaluasi Diri Sekolah*) was carried out through an application system accessed on the website pmp.dikdasmen.kemendikbud.go.id using the DAPODIK access account. The analysis of education quality mapping data was carried out on the output of EDS results that were extracted from the system, which resulted in the following documents: (a) National examination results, (b) Accreditation results, (c) Certification results, and (d) School self-evaluation results. These documents indicate that there was improvement, except for the certification results, as more than half the teachers are yet to be certified. This shortcoming was the result of a waiting list to join the certification program managed by the government.

6. Conclusion, Limitations, and Suggestion

A education quality assurance system is a means to improve the quality of education and promote a culture of quality at schools. Although it is a mandatory policy in Indonesia, some elementary schools are struggling to implement it. This research sought to identify alternative steps that can be taken to improve the implementation of the system at elementary schools. Nine steps were followed in mapping the education quality (SPMI) at an elementary school on Kalimantan Island, Indonesia. The nine steps were 1) Building management commitment, 2) Establishing a quality improvement team, 3) Building quality awareness, 4) Doing communication and outreach, 5) Forming a GKM, 6) Preparing educational quality mapping instruments, 7) Collecting mapping data, 8) Processing and analyzing mapping data, and 9) Compiling mapping results documents. In spite of issues relating to teacher certification, the results of SPMI implementation implies that the achievement of new quality standards improves every year, which is evidenced by better national examination results, improvement in school accreditation, increase in the number of teachers being certification, and also improvement in self-evaluation results.

The findings of this study indicate that school quality standards are improving every year, as demonstrated by the EDS results, which show an increase of 8 points compared to the SNP. There was an increase in the average value of Standard 1, by 1.1, Standard 2 by 0.6, Standard 3 by 1.1, Standard 5 by 1.5, Standard 6 by 0.7, Standard 7 by 1.1, and Standard 8 by 1. Additionally, national examination (UN) scores improved, surpassing the average score at the provincial level. As a result, schools have been able to obtain superior accreditation ratings. In other words, the nine steps had an impact on obtaining school accreditation with a superior rating.

This research focused on improving education quality at the elementary school level in Balikpapan, East Kalimantan, Indonesia. The steps formulated can be developed further for wider coverage and other education levels. They can serve as a reference for improving elementary school education quality in other regions and countries too. However, this research focused only on the quality of education at the elementary level, thus, those who are interested in undertaking similar, related research can choose other education level, involve a greater number of school participants, or use different standard.

This research resulted in nine action steps that can be applied to enhance the quality of elementary school education, as a real effort to realize and appreciate government policies to achieve SNP. Therefore, it is recommended that these nine actions steps are implemented and developed by policymakers and education actors to enhance the quality of elementary school education. Specifically, the applied and research department of the Indonesian education system can adopt these action steps to enhance the quality of elementary education in Indonesia.

Acknowledgment

Thanks go to the Institute for Research and Community Service at the Islamic University of Bandung for providing funding for this research project (No.

100/B.04/LPPM/XII/2020). We hereby declare that we have no conflicts of interest regarding the research.

7. References

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