

Effectiveness of TQM-Based Academic Supervision Models in Kudus Regency State Primary Schools

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Abstract: This development research or research and development (R & D) has the following objectives: to determine the level of effectiveness of the TQM-based academic supervision model design in Kudus district elementary schools. Academic supervision is an activity carried out by the school principal as a supervisor with the aim of improving the professional abilities of teachers. The TQM approach focuses on quality or quality. This research method involves the R & D research stage which is followed by testing the effectiveness of the model using N Gain data. Data collection techniques are observation, interviews, questionnaires, testing, document analysis and secondary data collection. The results of this research show that; the TQM-based academic supervision model in Kudus district elementary schools has effectiveness, namely: (a) the N-gain score category is high because the average N-gain value is greater than 0.7, namely $0.8561 > 0.7$; (b) N-Gain Score Effectiveness interpretation category, Effective category because the average Ngain percent value is 85.6079; (c) the academic supervision model has a good level of convenience and benefits in implementing TQM-based academic supervision. This research recommends the use of TQM-based academic supervision in schools with the aim of increasing teacher professionalism.

Keywords: academic supervision, TQM

1. Introduction

The quality of education in schools is a shared responsibility between the principal, teachers, school community, community and stakeholders. Teachers are the spearhead of the school who have direct contact with students. The quality of graduates or output can be determined by the quality of teachers. Teacher competency or ability must always develop following developments in the curriculum and science. Teachers are the spearhead of educational success. The professionalism of a teacher can be seen from his competence as a teacher which consists of pedagogical, professional, personal and social competencies. One of the dimensions of teacher competence in accordance with the Regulation of the Minister of National Education of the Republic of Indonesia Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competency is professional competence. This Permendiknas means that a teacher must be competent in carrying out his professional performance. Teacher professional competency according to Minister of National Education Regulation Number 16 of 2007 consists of the teacher's ability to: (1) master the material, structure, concepts and scientific mindset that supports the subject being taught; (2) master the competency standards and basic competencies of the subject/development area being taught; (3) developing learning materials taught creatively; (4) develop professionalism continuously by carrying out reflective actions; and (5) utilize information and communication technology to communicate and develop oneself.

Research by Behlol et al. (2011) stated that 87.5% of academic supervision carried out by school principals and school supervisors apparently did not even visit classrooms to provide professional guidance to teachers, 75% of supervisors were not democratic in carrying out supervision, even the competence of supervisors and school principals was still in the category less competent. Marzano, Frontier & Livnston (in Cahayono AB, 2014: 114) state:

“the puroppse of supervision should be the enhancement of teacher’ pedagogical skills, with the ultimate goal of enhancing student achievement”

Gregorio in Baltasar (2022: 98) states that there are five main functions of supervision, namely: inspection, research, training, guidance and assessment. The function of an inspection includes, among others, playing a role in studying the state and condition of the school, and at related institutions, the duties of a supervisor include conducting research on the condition of the school as a whole, including the principal, teachers, students, curriculum, learning objectives and teaching methods, and The aim of the inspection is to find problems by conducting observations, interviews, questionnaires, meetings and filling in checklists. Ministry of National Education (2011: 9) states that academic supervision is one of the fundamental functions in all school programs. The results of supervision function as a source of information for the development of teacher professionalism. There are five steps in developing teacher competency through academic supervision, namely (a). create harmonious relationships; (b) needs analysis; (c) developing strategy and media; (d) assess and (e) revise.

Lalupanda (2019) stated that academic supervision carried out by school principals is an effort to improve teaching, including stimulating, selecting position growth and development of teachers as well as revising learning objectives, teaching materials, methods, teaching evaluation or assessment. Academic supervision can help teachers learn and understand their duties and roles as educators. Baltasar (2022:107) concludes that collaborative supervision can improve teachers' professional competence.

Previous research showed that there were obstacles encountered in implementing academic supervision. This creates problems for school principals and supervisors in increasing teacher professionalism in teaching in the classroom. Akhmad FAP. (2022) stated that the obstacles experienced in academic supervision by school principals were the lack of supervisory staff, the large number of teachers who had to be trained, the lack of intensity of supervision and the lack of development of supervisory competence by supervisors. Saifani et.al (2022) stated that the implementation of academic supervision still has obstacles including limited time for school principals, lack of senior teachers and colleagues, a large number of teachers, lack of funds in the RAPBS, there are still teachers who do not understand the purpose of academic supervision.

A phenomenon that occurs in elementary schools in Kudus's district, especially in the Kudus district area, is that the results of academic supervision carried out by the school principal do not produce as expected. Teachers still have old patterns in teaching and teachers' abilities in preparing lesson plans, implementing learning and carrying out assessments still refer to patterns that are not in accordance with the curriculum. Based on the results of a survey conducted on 12 principals of state elementary schools.

In the field of implementing academic supervision, there are weaknesses in the implementation of school principals, including: First, the subjectivity of the principal, namely the implementation of academic supervision often relies on the subjective approach of the principal. Second, the limited time that school principals have. Ordinary methods often experience time limitations in carrying out academic supervision. Third, limited resources. Fourth, lack of teacher professional development. Fifth, lack of teacher participation. As a result, academic supervision may not be effective in encouraging positive changes in teaching.

Based on the results of interviews with teachers, the frequency with which school principals carry out supervision is very rare. 80% of teachers answered that on average school principals carry out non-programmed academic supervision and a maximum of once a year on average. Facts in the field of implementation of academic supervision in implementation planning, materials provided, feedback and follow-up are not in line with expectations. This is what has the impact of not maximally increasing teacher competency in classroom learning. Based on the results of a questionnaire of 30 teachers in the Kudus district, the perception of the implementation of supervision so far is that teachers have not fully met the expectations of elementary school teachers. This research took place in all elementary schools in the Kudus district area due to the following considerations. (1) The TQM-based academic supervision model has never been implemented in this elementary school area; (2) Elementary schools in the Kudus area are the scope of this research. This will make research easier and facilitate research implementation; (3) The distance between schools in one area is very close, making it easier to carry out research. This will provide easy access in compiling or planning models, trials and resulting models; (4) There are similarities in the problems faced by all elementary schools in the Kudus district area. The problems and obstacles faced in implementing academic supervision in elementary schools are almost the same.

The results of this pre-research are also supported by factual conditions in the field which show that the supervision carried out by the principal at state elementary school 2 Kedungsari and state elementary school 3 Karang Malang is less effective. This is because there are still overlapping duties and roles of elementary school principals so that the frequency of supervision is sometimes carried out to the extent of dropping assignments without any evaluation and follow-up. This is what encourages development research to be carried out on TQM-based academic supervision.

2. Theoretical Study

2.1 Academic Supervision

2.1.1 Definition

Academic supervision is an activity of guidance and assistance from supervisors (school principals) to teachers in

improving teaching by increasing teachers' professional abilities, as stated by Sutjipto and Mukti (2017: 132) that academic supervision is all efforts made by supervisors to provide assistance to teacher improvement, which is aimed at improving teachers' professional abilities in carrying out their duties. Meanwhile, Zaini (2017: 33) stated that academic supervision is an activity that has been officially programmed by an organization which directly influences teacher behavior and through this effort helps student learning achieve organizational goals. Meanwhile, Sutisna (2019: 223) stated that academic supervision is all efforts by school officials which are directed at providing leadership for teachers and other education personnel in improving teaching. This involves stimulating the professional growth and development of teachers, selecting and revising educational objectives, teaching materials and teaching methods and their evaluation.

From the opinions of these experts, there are three important things that animate academic supervision, namely (1) academic supervision is an action that has been officially programmed by the organization; (2) academic supervision is an action carried out by the supervisor (school principal) and directly influences the teacher's professional abilities; (3) academic supervision influences the teacher's abilities which in turn improves the quality of students' learning, so that school goals can be achieved optimally.

2.1.2 Objectives and Principles of Academic Supervision

The aim of academic supervision according to Nawawi (2017: 105) is to carry out assessments or evaluations and to help make improvements and point out deficiencies so that they can be addressed personally. Rifa'i (2017: 60) states that the objectives of academic supervision by school principals are as follows: (a) to help teachers understand the goals and functions of the school in an effort to achieve educational goals; (b) help teachers understand the needs and problems faced by their students; (c) to implement effective leadership in a democratic manner in order to improve professional activities in schools, and cooperative relationships between teachers to jointly improve their abilities; (d) discover the abilities and strengths of each teacher; (e) help teachers improve their teaching performance abilities; (e) assist teachers in the orientation period; (f) help teachers find learning difficulties faced by their students.

The principles of academic supervision according to Ametembun (2018: 43-44), namely fundamental principles and practical principles. The fundamental principles reflect the content of the five points of Pancasila as the way of life and foundation of the Republic of Indonesia. Meanwhile, practical principles are used as guidelines by school principals in carrying out academic supervision. These practical principles are positive, and some are negative. Positive principles, including supervision, should be constructive and creative, based more on the collective resources of the group rather than the supervisor's own efforts, based more on professional relationships, not on personal relationships, can develop the teacher's strengths, can provide a feeling of security to the students. teacher, progressive, implemented gradually but with persistence, based on actual conditions and reality, simple and informative in its implementation and objective and capable of self-evaluation. Negative principles, including that supervision must not be urgent/directive, must not be based on power of rank/position or on the basis of personal power, must not be separated from educational and teaching goals, must not be too much about detailed questions regarding how to teaching methods and teaching materials, must not look for mistakes and shortcomings and must not be too quick to expect results and must not be quickly disappointed.

2.2 TQM in Educational Institutions

TQM in the world of education is defined as integrated educational quality management (MMTP). Hensler&Brunell's opinion (in Widiyono&Kardoyo, 2020: 40) states that there are four main principles of MMTP, namely: (a) Customer satisfaction, namely students, teachers, society; (b) respect for people, which means that management must be responsive to each person's needs. person. Schools must always innovate continuously; (c) Management is based on facts, namely the implementation of management must be based on reality in the field; (d) improvements are made continuously.

Management in general and educational management have management functions, namely planning, organizing, actuating and controlling.

Based on the above, it can be concluded that integrated education quality management must contain the principles of customer satisfaction, have a good response to customers, implement standard management and make continuous improvements.

2.2.1 Relationship between Academic Supervision and TQM

Based on research by Masturi, Ramdani & Muntari (2017), a strategy that can improve teacher performance is Total Quality Management (TQM). Increasing teacher performance will have an impact on the quality of education. Research by Azizah & Witri (2021) and Indana (2017) shows that TQM is able to improve the quality of education, while according to Dewi & Primayana (2019) TQM is a management that is able to move school organizations and create a conducive and sustainable learning environment. According to Syafaruddin (2002: 36), TQM education is a quality management strategy that is adapted to the basic nature of schools as humanitarian service organizations (fostering student potential) through the development of quality learning in order to produce graduates who meet the expectations of parents, the community and other educational customers. The main goal

of educational TQM is to improve the quality of education through improvements in all educational components in a sustainable and gradual manner (Azizah & Witri, 2021). The principle to achieve this goal is to focus on customers, improve quality through processes and involve the entire existing team as a whole. Successful implementation of TQM in the education sector must be supported by continuous improvement in the quality of education through leadership, education and training, structural support, communication, rewards and recognition and measurement. According to Zazin (2011) TQM can develop programs through planning which will later be able to demonstrate excellence for educational units so that researchers are interested in analyzing the application of TQM in improving teacher performance.

3. Research Methods

This research includes research and development (research and development or R & D). This development model uses development according to Borg and Gall (1989) which is a descriptive procedural one, where this model has the characteristics of research and development, namely, to produce products.

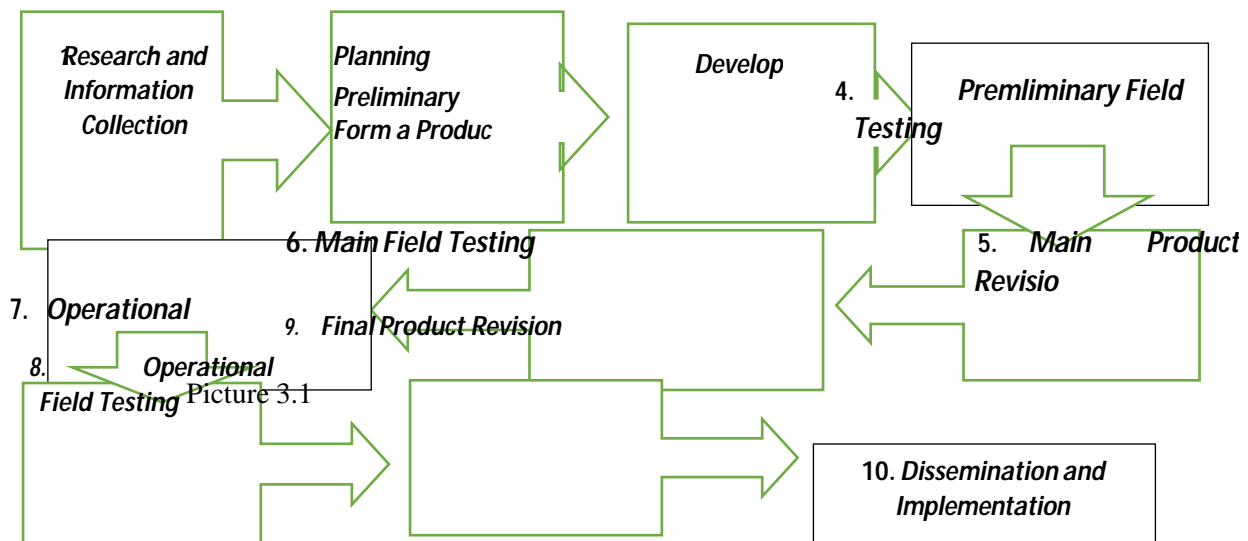


Fig. 1 - R and d steps according
(source: Sugiyono, 2021: 764)

The data used in this research are qualitative and quantitative data. Qualitative data was obtained from interviews with elementary school principals in the Kudus district sub-district area in the form of criticism, suggestions from education management experts, supervision experts and resource persons verbally and in writing as constructive input for product revision materials. The test subjects were the target users of the product, namely principals in elementary schools in Kudus's district, namely principals of elementary schools in Gebog, Kaliwungu, Kota, Bae, Jekulo, Undaan and Mejobo sub-districts.

The instrument in this research is an assessment sheet regarding the feasibility of the academic supervision model. This instrument was prepared to determine the quality of the TQM-based supervision model that will be developed. The assessment is carried out by material experts and education management experts.

The technique used to ensure the validity of the data as well as the depth and clarity of understanding of school marketing in the findings of this research is the triangulation technique. Data Analysis of Supervision Model Product Validity Levels The first is to carry out data calculations by calculating the mean of each data obtained using the following formula (Sugiyono, 2015: 280):

$$\text{Mean} = \frac{\sum X}{N}$$

Information:

Mean: average score

$\sum X$: total score obtained N : total number of items

Analysis of trial data for the academic supervision development model will be carried out using N-Gain analysis to determine whether there is an increase in pre-test and post-test results (scientific literacy test with the N Gain formula:

$$g = \frac{\text{Post test score} - \text{pretest score}}{\text{Ideal score} - \text{pretest score}}$$

In this research, N Gain data analysis uses SPSS software to obtain effectiveness values for the TQM-based supervision model. Table 3.1 Interpretation of effectiveness assessment criteria measures with N-Gain. In this research, N Gain data analysis uses SPSS software to obtain effectiveness values for the TQM-based supervision model.

Table 1 - Interpretation of effectiveness assessment criteria measures with n-gain.

No	value <i>N-gain</i>	Category
1	$G > 0,7$	High
2	$0,3 \leq G \leq 0,7$	medium
3	$G < 0,3$	Low
4	$G = 0,00$	No decrease occurs
5	$-1,00 \leq G < 0,00$	No decrease occurs

4. Research Results and Discussion

4.1 Research Results

Based on the results of development research, the following TQM-based academic supervision model was produced.

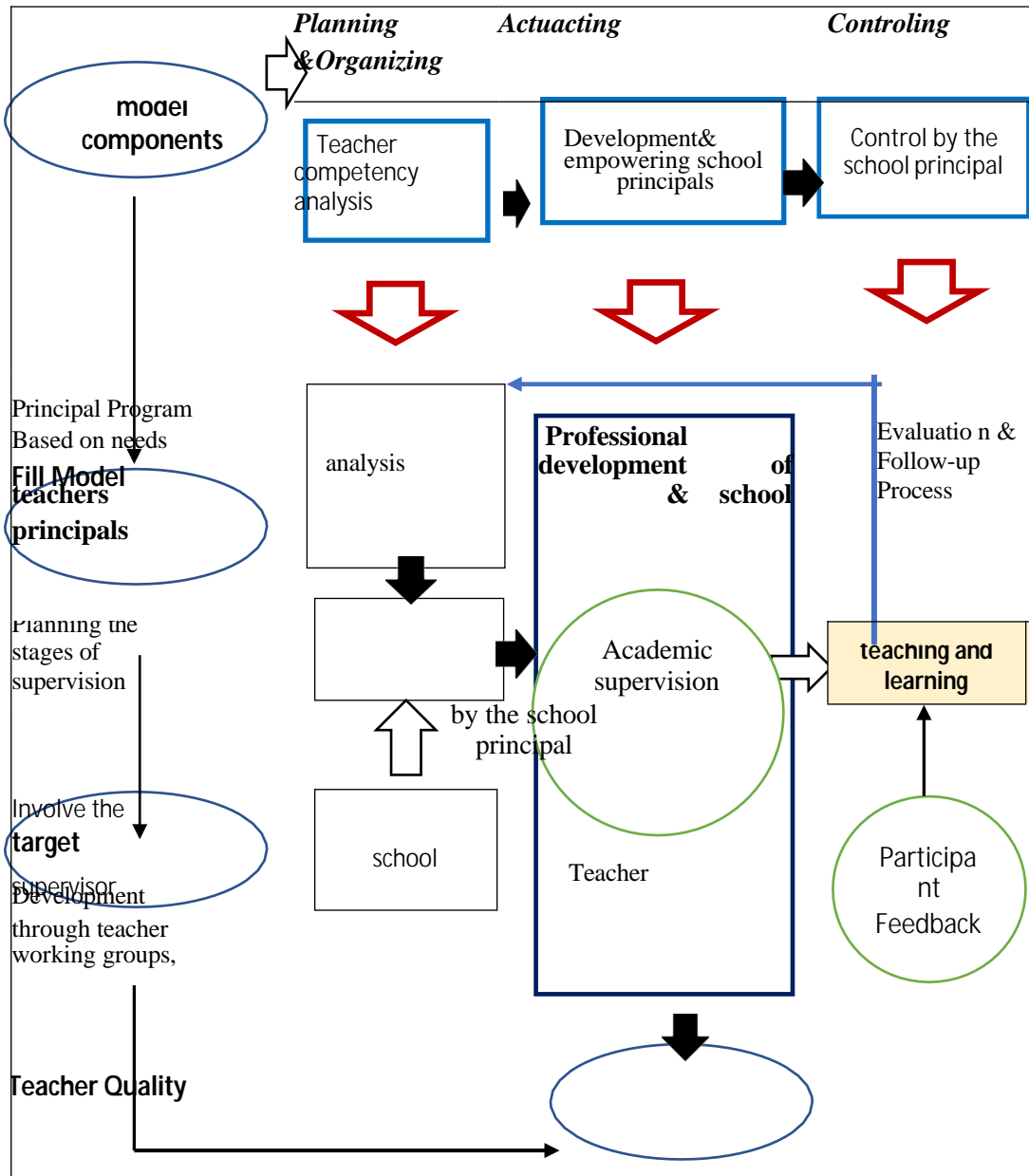


Fig. 2 - Final model of tqm-based academic supervision (source: developed by researchers).

The effectiveness of academic supervision is based on the results of the school principal respondents' perceptions after implementing the academic supervision model before implementing the TQM model and after using the TQM-based supervision model. Based on the results of the questionnaire data, steps are then carried out: (a) Tabulation of data; (b) N-Gain analysis using SPSS 21 software.

The summary of the N-Gain data results is as follows.

Table 2 Results of N-Gain Analysis with SPSS

Table 2 - Descriptives descriptive statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
<i>Ngain-Score</i>	32	,60	1,00	,8561	,14717
<i>Ngain-Persen</i>	32	60,00	100,00	85,6079	14,71708
Valid (listwise)	N 32				

Source: SPSS 21

Based on the table above, conclusions can be drawn:

- 1) The N-gain score category is high because the average N-gain value is greater than 0.7, namely $0.8561 > 0.7$;
- 2) The N-Gain Score Effectiveness interpretation category is in the Effective category because the average Ngain percent value is 85.6079 where 85.6079 is > 76 .

The results of research conducted by Kweku Esia-Donkoh and Eric Ofosu-Dwamena (2014) revealed that teachers need supervision to improve their ability to teach. School principals must change the views of the majority of teachers who still have negative perceptions of the implementation of academic supervision. Excessive fear from the teacher being supervised if the principal plans to enter the classroom for observation. Therefore, for supervision to be effective, all stages in the TQM-based supervision model must be implemented. The supervision model developed in this research is an effective model. The model developed in this research begins with the teacher's initiative. Teachers who take the initiative will make the implementation of supervision comfortable so that the expected results can be achieved. The final model as a research product has the following updates: (1) supervision planning is bottom up; (2) supervision is carried out based on needs analysis; (3) supervision is carried out on the teacher's initiative; (4) a mutually beneficial relationship between supervisors and supervised teachers starting from planning, implementation, evaluation and follow-up; (5) the aspects measured are more precise, in accordance with the characteristics of productive teachers; (6) students are involved in providing feedback on the quality of learning in the classroom. This research develops a TQM-based academic supervision model which differentiates this model from the initial concept in that between one stage and another the quality process stage can be used.

4.2 Research Discussion

Based on the results of this development research, a final model of TQM-based academic supervision was obtained. Based on research by Masturi, Ramdani & Muntari (2017), a strategy that can improve teacher performance is Total Quality Management (TQM). Increasing teacher performance will have an impact on the quality of education. Research by Azizah & Witri (2021) and Indana (2017) shows that TQM is able to improve the quality of education, while according to Dewi & Primayana (2019) TQM is a management that is able to move school organizations and create a conducive and sustainable learning environment. According to Syafaruddin (2002: 36), TQM education is a quality management strategy that is adapted to the basic nature of schools as humanitarian service organizations (fostering student potential) through the development of quality learning in order to produce graduates who meet the expectations of parents, the community and other educational customers. The main goal of TQM education is to improve the quality of education through improvements in all educational components in a sustainable and gradual manner (Azizah & Witri, 2021). The principle to achieve this goal is to focus on customers, improve quality through processes and involve the entire existing team as a whole. In order for the implementation of TQM in the education sector to be successful, it must be supported by continuous improvement in the quality of education through leadership, education and training, structural support, communication, rewards and recognition and measurement. According to Zazin (2011), TQM can develop programs through planning which will later be able to demonstrate excellence for educational units so that researchers are interested in analyzing the application of TQM in improving teacher performance. This TQM-based academic supervision model includes planning, organizing, implementing (actuating) and evaluation (controlling).

1) Planning and organizing

The school principal as supervisor determines the objectives of the supervision to be carried out. The school principal carries out careful planning in compiling a program of academic supervision activities. The preparation of a teacher needs analysis needs to be facilitated by the school principal to facilitate supervision activities and teaching and learning activities in the classroom. Two-way communication between school principals and teachers is needed in order to reach agreement in developing the competency requirements required by teachers.

The school principal carries out a comprehensive analysis of teacher competency needs. Competencies that teachers do not yet have will be a priority in the focus of academic supervision later. The school principal socializes the implementation of academic supervision by explaining the objectives and benefits of the supervision that will be implemented. Next, the school principal prepares a supervision program referring to the targets to be achieved which are approved by the school supervisor. The principal prepares a supervision schedule that has previously been agreed upon between the principal and the teacher. The teacher acts as a supervisor after preparing all the devices and media that will be used in learning.

2) Implementation

Supervision is carried out according to a predetermined schedule. The school principal directly observes the implementation of supervision, which can be done directly or via CCTV media. This depends on the availability of facilities at the school. The school principal makes observations based on the instruments he has. In this model, students are involved in providing feedback on the quality of learning implemented by the teacher. Students or students as consumers have the right to give satisfaction scores to the teacher's performance. After completion, the principal holds a discussion with the teacher being supervised regarding the implementation of the applied learning. The school principal provides input and direction based on the results of supervision and input from students. The principal and teacher make an agreement regarding the follow-up action carried out by the teacher towards the development of teacher professionalism. If teachers are stated to have to carry out self-development, the principal will facilitate this.

3) Evaluation

The principal assesses the teacher's ability to teach and provides feedback. The results of this evaluation, the teacher has the right to know the results of the scores. The school supervisor controls the implementation of supervision carried out by the school principal. The school supervisor will provide coaching to the school principal if needed. The TQM- based academic supervision model involves students in providing feedback on the implementation of teaching and learning activities carried out by teachers. With the participation of students, it is hoped that they will be able to provide evaluation and reflection for teachers in implementing learning in the classroom.

Students as consumers or those who receive knowledge from teachers will have a role in how good the abilities of the teachers who teach them are. This will be a source of feedback for teachers and school principals in improving services to students. The impact will be continuous improvement in realizing quality learning, quality teachers, quality school principals, quality graduates and quality schools.

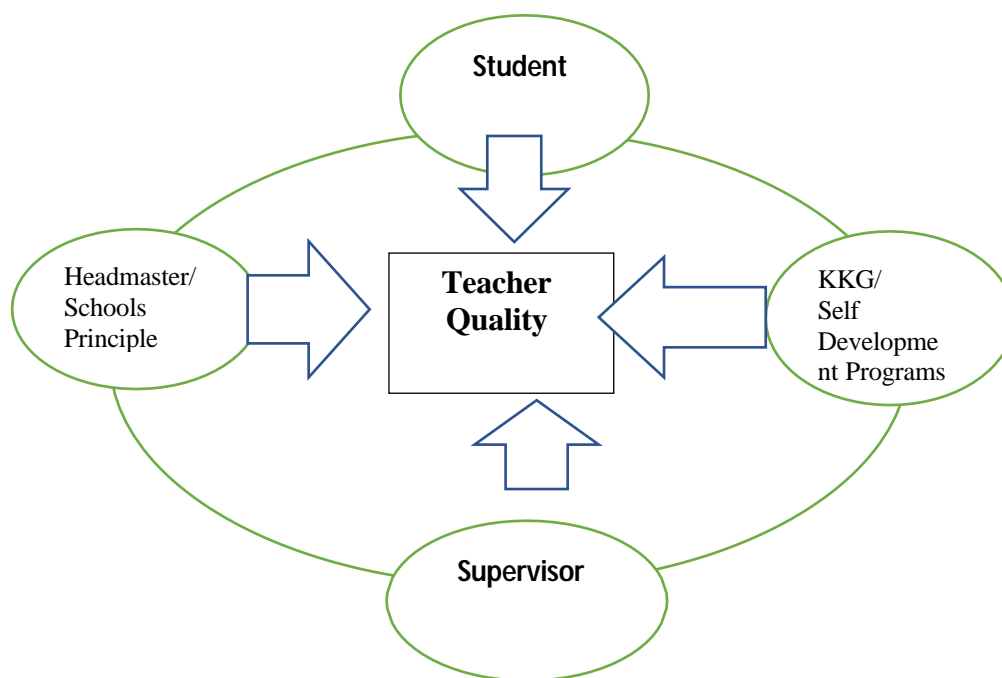


Fig. 3 - Collaboration of
(source: developed by researchers)

The picture above shows the collaborative relationship between school principals, school supervisors, teacher forums and students in achieving maximum supervision results and realizing increased teacher quality. The four components above have the same goal in order to realize the quality of students and the quality of learning and the quality of teachers on an ongoing basis.

Good collaborative relationships between school principals, school supervisors, teachers, students and teacher forums (KKG) will be able to realize the vision, mission and goals of the school and education that will be achieved. Competent school principals, competent supervisors, competent teachers, active and productive teacher forums, critical and creative students are the hopes of all educational institutions and departments.

By implementing a TQM-based academic supervision model, school principals must enter and observe classes because of collaboration with students and mutual control for quality assurance. Marzano, Frontier & Livnston (in Cahayono AB, 2014: 114) state:

"The purpose of supervision should be the enhancement of teachers' pedagogical skills, with the ultimate goal of enhancing student achievement"

The above statement means that the aim of supervision should be to improve the teacher's pedagogical skills, with the ultimate aim of increasing student achievement. Academic supervision must have a positive impact on improving the quality of teachers, school principals and students.

Gregorio in Baltasar (2022:98) states that there are five main functions of supervision, namely: inspection, research, training, guidance and assessment. The main functions of supervision have been integrated in the TQM-based academic supervision model which has good advantages and effectiveness. TQM-based academic supervision prioritizes quality in planning, organizing, implementing and evaluating.

Based on the description above, it can be concluded that the TQM-based academic supervision model is feasible and effective for use by teachers in Kudus's district elementary schools. The TQM-based academic supervision governance model can be described as follows.

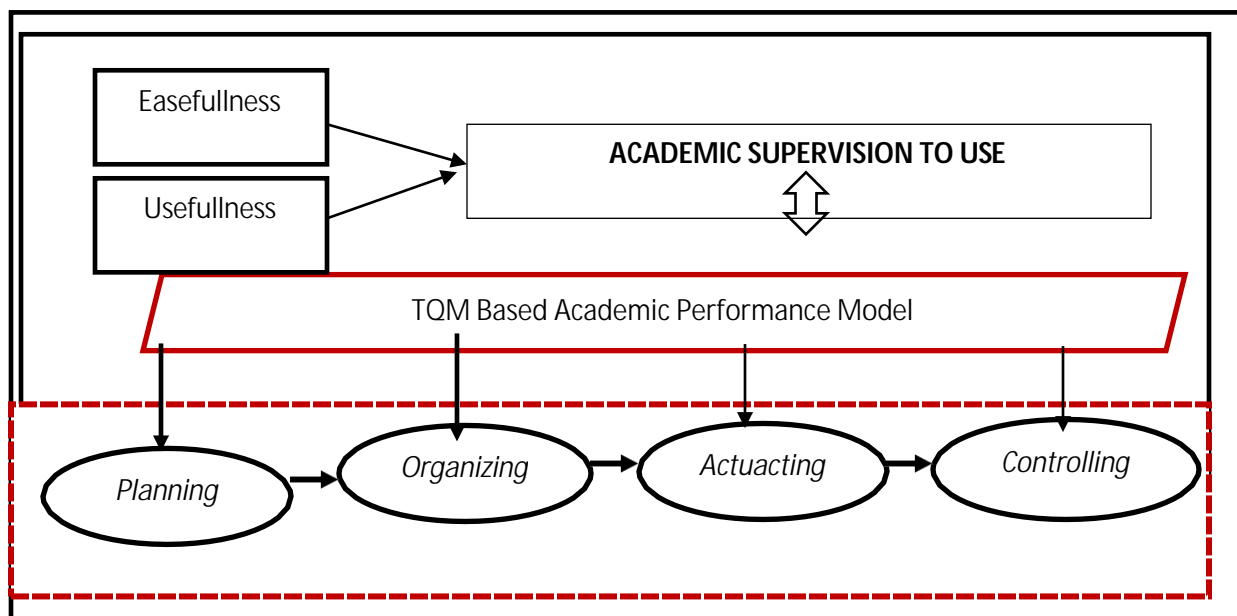


Fig. 4 - Effectiveness of tqm-based academic supervision management model.

(source: developed by researchers)

Based on the TQM-based academic supervision management model, statistically and empirically it has good convenience and benefits in the use of academic supervision carried out by school principals. School principals as users feel better effectiveness compared to the model currently used. The benefits felt are more pronounced because the impact is greater in terms of developing teacher competency, principal competency, school supervisor competency as well as improving the quality of graduates or students. TQM-based academic supervision makes it possible to increase motivation, teacher and student achievement.

5. Closing

5.1 Conclusion

Based on the description above, the conclusions in this development research can be concluded as follows: The TQM-based academic supervision model in Kudus district elementary schools has effectiveness, namely: (a) the N-gain score category is high because the average N-gain value is greater than 0.7, namely $0.8561 > 0.7$; (b) the N-Gain Score effectiveness interpretation category is in the effective category because the average Ngain percent value is 85.6079 where 85.6079 is > 76 ; (c) The academic supervision model has a good level of convenience and benefits in implementing TQM-based academic supervision.

5.2 Implications

The implication of this research is that the TQM-based academic supervision model can be applied by school principals in the context of implementing academic supervision of teachers. The implications of the results of this research are as follows: (1) by implementing a TQM-based academic supervision model, it is hoped that there will be an increase in the quality of education. TQM emphasizes continuous improvement and achieving high standards. Involvement of supervisors and teaching staff in the evaluation and improvement process, errors and weaknesses in the system can be identified and corrected effectively. This has the potential to result in improvements in curriculum design, teaching methods, and student learning experiences; (2) development of professionalism of school principals, supervisors and teachers. Through the implementation of a TQM-based academic supervision model, supervisors and teaching staff are involved in developing their professionalism. They are involved in a continuous evaluation and improvement process, which helps them improve their skills and knowledge in carrying out their duties. It can also help in strengthening communication and collaboration between supervisors and teaching staff, thereby creating a more positive and productive work environment; (3) increasing student satisfaction. With the TQM-based academic supervision model, focus is given to student satisfaction. Through comprehensive evaluation and ongoing updates, student needs and expectations can be better met. An effective and responsive supervision system can help identify problems or weaknesses in the student learning experience, and thereby enable appropriate remedial steps. This has the potential to increase student motivation, participation and overall academic outcomes; (4) more efficient resource management: TQM-based academic supervision models can help optimize the use of resources in educational institutions. With a focus on continuous improvement, supervisors and faculty can identify and address waste or inefficient

practices. This can lead to cost savings, wiser use of resources, and increased overall operational efficiency; (5) there is an improvement in the school's reputation. By implementing a TQM-based academic supervision model, educational institutions can achieve high and sustainable quality standards. This can contribute to improving the institution's reputation in the eyes of the public, parents and prospective students. A good reputation can help in increasing the attractiveness of an institution, attracting quality students, and strengthening the institution's position in intense educational competition.

Suggestions

Based on the results of this development research, suggestions are given as follows.

a. Headmaster

School principals are advised to understand the concept of Total Quality Management (TQM) by exploring its principles, tools and measurement methods. This will help school principals in directing the implementation of the TQM-based academic supervision model in schools. School principals are to build a culture of quality in schools by encouraging teamwork, active participation, and open communication between supervisors, teachers, and school staff. Principals should support professional development. Principals to provide necessary support and resources for supervisors and teachers in professional development. This can include training, workshops and other development opportunities related to the TQM-based academic supervision model. School principals can provide adequate time and space for teachers to carry out TQM-based academic supervision tasks. This includes time for reflection, collaboration, data analysis, and improvement planning. Principals should facilitate collaboration between supervisors, teachers, and school staff. This can be done through regular meetings, discussion groups, or work teams focused on improving the quality of education. By encouraging collaboration, principals can leverage different skills and experiences to achieve better results.

b. Teacher

Teachers must understand the concepts and principles of TQM. Teachers should learn about TQM and how it can be applied in the context of academic supervision. This will help teachers understand the importance of continuous improvement and contribute to developing the quality of education in schools. Teachers must be actively involved in the continuous evaluation and improvement process. Teachers are expected to apply TQM principles in classroom teaching practices. Teachers must collaborate with supervisors in implementing a TQM-based academic supervision model. Good collaboration can strengthen teacher professional development and improve the quality of learning in the classroom.

c. School supervisor

School supervisors must establish effective communication with school principals, teachers and school staff. supervisors to listen to input, provide constructive feedback, and ensure a clear understanding of the goals and processes of TQM-based academic supervision. School supervisors to provide the necessary support and resources for teachers in implementing the TQM-based academic supervision model. School supervisors should adopt a collaborative approach between school principals and teachers in TQM-based academic supervision.

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Conflict of Interest

The authors declare no conflicts of interest.

References

- Akhamd FAP, 2022. Efektivitas Pelaksanaan Supervisi Akademik Pengawas dalam Meningkatkan Kompetensi Profesional Guru Pai di SD di kecamatan tambun selatan. *Jurnal Parameter* Vol 7 No 1 Pebruari 2022.
- Ali. 2015. *Penelitian Kependidikan Prosedur dan Strategi*. Bandung: Angkasa.
- Ametembun. 2018. *Supervisi Pendidikan Penuntun bagi Para Penilik, Pengawas, Kepala Sekolah dan Guru-guru*. Bandung: Suri.
- Arikunto. 2018. *Prosedur Penelitian, Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.
- Arrosit, A. M. M. 2021. *Supervisi Akademik Kepala Sekolah Dalam Meningkatkan Kinerja Guru (Studi Kasus*

Di MA Maarif Al-Falah Ngrayun Ponorogo). IAIN Ponorogo.Google Scholar

Astika, Y. W., Fitriyani, F., & Burhanuddin, B. 2020. Implementasi Peraturan Menteri Pendidikan Nasional Nomor 13 Tahun 2007 Tentang Standar Kompetensi Kepala Sekolah. *Cermin: Jurnal Penelitian*, 4(2), 255268. Google Scholar

Cahyono, Agus Budi. 2014. Pengembangan Model Supervisi Akademik Berbasis Total Quality Management di SMP Negeri Kabupaten Tulungagung Provinsi Jawa Timur. *Educational Management* 3 (2) (2014) Universitas Negeri Semarang. ISSN 2252-7001.

Danumiharja, M. 2014. *Profesi Tenaga Kependidikan*. Deepublish. Google Scholar

Direktorat Pembinaan Pendidik dan Tenaga Kependidikan Pendidikan Dasar – Direktorat Jenderal Pendidikan Dasar Kementerian Pendidikan dan Kebudayaan, 2014, Supervisi Pembelajaran - Bahan Materi Bimbingan Teknis Penguatan Kepala Sekolah , Jakarta.

Direktorat Tenaga Pendidik – Dirjen PMPTK – Depdiknas RI, 2007. *Supervisi Akademik dalam Peningkatan Profesionalisme Guru*, Jakarta.

Direktorat Tenaga Pendidik – Dirjen PMPTK – Depdiknas RI, 2008. *Metode dan Teknik Supervisi*. Jakarta.

Djamal, M. 2015. *Paradigma Penelitian Kualitatif*. Yogyakarta: Pustaka Pelajar. Google Scholar

Eripdawati, Nurhizrah Gistituati, Sufyarma Marsidin, Yahya. 2018.The Development of the Academic Supervision Model Basic School Supervisor. *Advances in Social Science, Education and Humanities Research, volume 178 Proceedings of the 1st International Conference on Innovation in Education (ICoIE 2018)* <https://doi.org/10.2991/icoie-18.2019.5>

Glickman, C.D 1995. *Supervision of Instruction*. Boston: Allyn And Bacon Inc.

Hakim, L. 2016. Pemerataan akses pendidikan bagi rakyat sesuai dengan amanat Undang- Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional. *EduTech: Jurnal Ilmu Pendidikan Dan Ilmu Sosial*, 2(1). Google Scholar

Jamila.2020. Pengembangan Model Supervisi Akademik Berbasis Kolaboratif (Studi Pada Pengawas Smp Dinas Pendidikan Kota Medan). *Jurnal Pendidikan Dasar Menengah Dan Tinggi (JMP_DMT)* . Vol 1 No 1 tahun 2020.

Khairani, F. 2020. Implementasi Peraturan Menteri Pendidikan Dan Kebudayaan Nomor 13 Tahun 2018 Dalam Rangka Tata Laksana Akreditasi Ban Paud Dan Pnf Di Kota Medan. Google Scholar

Khunaifi, A. Y., & Matlani, M. 2019. Analisis Kritis Undang-Undang Sisdiknas Nomor 20 Tahun 2003. *Jurnal Ilmiah Iqra*, 13(2), 81102. Google Scholar

Lalupanda, Erfi M, 2019. Implementasi Supervisi Akademik Untuk Meningkatkan Mutu Guru. *Jurnal Akuntabilitas Manajemen Pendidikan*. Vol 7 No 1 April 2019

Lina Handayani, , Madjdi AH dan Su`ad .2021.Pengembangan Model Supervisi Akademik Berbasis Rekan Sejawat di SMP Negeri Se-Kecamatan Bae Kabupaten Kudus. *Jurnal Studi Guru dan Pembelajaran*, Vol. 4, No. 2, August 2021.

Lita Latiana, Samsudi Samsudi , Sugiyo Pranoto , Slameto Slameto.2017.Academic Supervision Model for the Early Childhood Education in the Municipality of Semarang. *The Journal of Educational Development*. Vol 5 No 3 (2017): October 2017.DOI 10.15294/JED.V5I3.18132

Masliah Eli.2019. Pengembangan Model Supervisi Akademik Teknik Mentoring dalam Upaya Peningkatan Mutu Pembelajaran. *Indonesian Journal of Education Management and Administration Review*. 2019 December, Volume 3 Number 2, pg 125-133

Meriza, I. 2018. Pengawasan (Controlling) Dalam Institusi Pendidikan. At-Tadib: *Jurnal Ilmiah Prodi Pendidikan Agama Islam*, 3746. Google Scholar

Moleong, L. J. 2013. Metode Penelitian Kualitatif, Bandung: Remaja Rosdakarya. Mutahajar.2019. Penerapan Supervisi Kolaboratif Untuk Meningkatkan Kompetensi Profesional

Guru Sdn 6 Jurit Kecamatan Pringgasela. *Jurnal Pendidikan Dan Sains*. Vol 1 No 3 desember 2019 hal. 282-303

Nasution, Lukman .2022. Pengembangan Model Supervisi Akademik Pengawas Berbasis Total Quality Management (TQM) Dalam Meningkatkan Mutu Proses Pembelajaran di Sekolah Dasar Kecamatan Medan Marelan. Doctoral Tesis, UNIMED. Nawawi. 2017 *Administrasi dan Supervisi Pendidikan*. Bandung: Sinar Baru.

- Nolan, J.F.2011. *Teacher Supervision and Evaluation*. Wiley: United State of America. Peraturan Menteri Pendidikan Nasional No. 13 tahun 2007 tentang Standar Kompetensi Kepala Sekolah/Madrasah, Jakarta.
- Purwanto, Ngalim.2003. *Administrasi dan Supervisi Pendidikan*. Bandung: Rosada karya Peraturan Menteri Pendidikan dan Kebudayaan. 2007. Peraturan Menteri Pendidikan dan
- Kebudayaan Nomor 13 Tahun 2007 tentang Standar Kepala Sekolah/Madrasah. Pidarta, Made. 1992. *Pemikiran Tentang Supervisi Pendidikan*. Jakarta: Bumi Aksara.
- Pusat Pengembangan Tenaga Kependidikan – Badan PSMPMP & K dan PMP Kementerian Pendidikan dan Kebudayaan, 2012. *Supervisi Akademik – Bahan Pembelajaran Utama*
- Rasto & Mulyani Heni.2017.Pengembangan Model Supervisi Akademik Untuk Meningkatkan Kualitas Pembelajaran Pada SMK Bidang Keahlian Bisnis dan Manajemen Di Kota Bandung. *Jurnal pendidikan Akuntasnsi dan keuangan*. Vol. 5, No. 2, [Juli-Desember], 2017 : 99-106.
- Ratno, Suyit & Elisa RA .2021. pengaruh Media sosial Whatshap terhadap Kinerja Guru di Masa pandemi Covid 19. *SEJ (School Education Journal)*. Vol 11 No 4 Desember 2021
- Rifa'i. 2017. *Administrasi dan Supervisi Pendidikan 2*. Bandung: Jemmars.
- Shahnaz S.S, Gunawan A, Abdul Muin. 2022. Analisis Supervisi Akademik Kepala Sekolah Sebagai Faktor Pendukung Kinerja Guru. *Jurnal Syntax Transformation*. VolVol. 3, No. 6, Juni 2022
- Slameto, S. 2016. Supervisi Pendidikan Oleh Pengawas Sekolah. *Kelola: Jurnal Manajemen Pendidikan*, 3(2), 192206. Google Scholar
- Soetjipta, N. R., Sofianti, T. D., & Mahendra, A. 2018. *Ground Crew Handling Rostering Development in GAPURA Using Constraint Programming Algorithm*. Swiss German University. Google Scholar
- Sugiyono. 2021. *Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R & D dan penelitian Pendidikan)*. Bandung: AlfaBeta
- Sutisna. 2019. *Manajemen Pelatihan dan Pengembangan Sumber Daya Manusia*. Semarang: Majalah Pendidikan
- Zaini. 2017. *Pedoman Pelaksanaan Supervisi Pengajaran*. Bandung: Andira