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Research Article

Development Of A Supervision Model To Enhance Competency In Educational Quality Assurance Among Academic Institution Administrators

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ABSTRACT

Quality assurance plays a pivotal role in ensuring the effectiveness and reliability of academic institutions, which requires understanding and attention from their administrators. This research aims to contribute to the enhancement of educational quality assurance competency among academic institution administrators through the development and evaluation of a supervision model. The study comprises three phases: phase 1 involves an investigation into the existing quality assurance competency framework and its relevance to the current context. Phase 2 focuses on the formulation and implementation of the supervision model derived from the established framework. Finally, phase 3 assesses the effectiveness of the implemented model at the curtain focus group. The supervision model integrates four strategic dimensions, termed the '4As': Awareness, Action, Assessment, and Accreditation, alongside seven approaches aimed at fostering knowledge, skills, and attributes on educational quality assurance. These approaches cover supervision documentation, online supervision seminars, remote supervision workshops, online learning platforms, focus group discussions, networking, and hybrid supervision sessions. The implementation of the model was conducted among 32 executives from secondary academic institutes in Nakhon Ratchasima, Chaiyaphum, Buriram, and Surin provinces, Thailand. The evaluation results reveal a significant improvement in the educational quality assurance competency among administrators who underwent the supervision model compared to both the control group and their initial competency levels. Furthermore, participants expressed high satisfaction levels with the model's efficacy.

Keywords: Supervision Model, Educational Quality Assurance, Academic Institution Administrators

1. Introduction

Education is a process that imparts knowledge and various qualities to individuals, enabling them to survive in the world, benefiting themselves, their families, and society at large. Therefore, the quality of education reflects the quality of individuals produced by the educational system. However, currently, many educational institutions face disparities and differences in terms of budget, quality, personnel, or even student-related factors, as well as facilitating factors such as the cooperation of the school's board, community support, agencies, or organizations near the school, and close monitoring and assistance from the educational area office or the parent agency. These factors impact the quality of educational management. Additionally, schools now have the autonomy to manage their own education, develop their own curricula, and thus the quality of students and management varies. According to the National Education Act of 1999 and its amendment (No. 2) of 2002 of Thailand, parent agencies and educational institutions are required to establish an internal quality assurance system, leading to the establishment of basic education standards (Educational Testing Bureau, 2011).
From the study of factors affecting and developing the quality of basic educational institutions, based on the three rounds of external quality assessments by ONESQA, it was found that a key factor contributing to the success of quality assurance is the school administrators. Therefore, it is necessary to first create understanding, awareness, and a positive attitude towards quality assurance among administrators. This is consistent with the findings of Phrongpromraj (2014), who found that academic leadership, the attitude of

school administrators towards quality assurance, and their sense of responsibility impact the level of practice and quality of quality assurance in basic education institutions. The research indicates that administrators play a crucial role in improving the quality of education. School administrators must regard quality assurance as a core responsibility, focusing on enhancing educational quality effectively and efficiently. Therefore, competency in quality assurance is essential for school administrators. Competency is important for both individuals and organizations, helping individuals understand their level of knowledge, skills, and abilities, and identifying areas for development. It also aids organizations in training and developing their personnel (Smitthikrai, 2007).

Educational supervision is a collaborative process between educational supervisors and schools aimed at enhancing or improving the quality of educational management and teaching practices to achieve effective learning outcomes for students. A key process accompanying management is educational supervision, which must be effective and efficient. Supervisors must possess expertise and a broad vision to support appropriate learning management. Therefore, in developing school administrators' competencies in quality assurance, those who supervise education must have a clear understanding of the principles, techniques, and methods of supervision. This knowledge enables them to conduct supervision, follow-ups, and provide serious and continuous support and guidance to school administrators (Office of the Education Council Secretariat, 2018). Given the importance and concepts in developing competency in educational quality assurance for school administrators, the researcher is interested in using the supervision process to enhance this competence. This approach combines traditional face-to-face supervision methods, such as workshops and directive and empowering supervision sessions for school administrators, teachers, and staff under working conditions, with online supervision using digital technology. This research aimed to study the components of competency in educational quality assurance for school administrators, develop a supervision model to enhance this competency, and evaluate the effectiveness of this model.

2. Research Methodology

This research aimed to study the conceptual framework of the supervision model and the components of the competency in educational quality assurance for school administrators. The research divided the steps into three phases: (1) Identification of the conceptual framework and the components of competency in educational quality assurance for school administrators, (2) Development of a supervision model to enhance competency in educational quality assurance for school administrators, and (3) Evaluation of the effectiveness of the constructed supervision model.

2.1 Phase 1: Identification of the conceptual framework and the components of competency in educational quality assurance for school administrators

The conceptual framework and the components of competency in educational quality assurance for school administrators were outlined from the study of theories, documents, and various research on educational supervision models. Then, this presumptive conceptual framework was divided into two parts: the conceptual framework of the educational supervision model and the framework of components of competency in educational quality assurance for school administrators.

Population and Sample

The population consists of 1,992 school administrators from the Office of Primary and Secondary Education Service Areas in Nakhon Ratchasima, Buriram, Surin, and Chaiyaphum provinces. The sample includes school administrators from these areas, determined using Lindman's (1980) concept (Wiratchai, 2012), which suggests a sample size of at least 10-20 individuals per parameter. This research identified 20 parameters to be estimated in the model. A minimum sample size of 400 is required for Confirmatory Factor Analysis (CFA). To account for response rates, the sample size is increased to a minimum of 500, using stratified random sampling as follows:

1). Divide the Office of Education Service Areas into two categories: 17 primary education service areas and 4 secondary education service areas.
2). Randomly sample 25% of the school administrators from each category, resulting in a total of 500 participants.

Research Instruments

Randomly sample 25% of the school administrators from each category, resulting in a total of 500 participants.

Data Analysis

The quality evaluation of the model will be analyzed using four standards by calculating the mean and standard deviation.

2.2 Phase 2: Development of a supervision model to enhance competency in educational quality assurance for school administrators.

This phase focuses on developing a supervision model for the school quality assurance

Population and Sample

The target group consists of nine experts with over 10 years of experience in educational development. This includes two experts in educational administration, three in educational quality assurance, three in educational supervision, and one in educational measurement and evaluation, selected through purposive sampling.

Research Instruments:

(1) An evaluation form for assessing the quality of the supervision model designed to enhance competency in educational quality assurance for school administrators.
(2) A manual for using the supervision model to enhance competency in educational quality assurance for school administrators.

Data Analysis:

The quality evaluation of the model will be analyzed using four standards by calculating the mean and standard deviation.

*2.3 Phase 3: Evaluation of the effectiveness of the constructed supervision model***Population and Sample:**

The population includes secondary and primary school administrators under the Office of Educational Service Areas in Nakhon Ratchasima, Chaiyaphum, Buriram, and Surin provinces. The sample for this research consists of 32 school administrators, selected through multi-stage random sampling as follows:
(1) Stratified random sampling was used to select 32 school administrators based on the size of their schools (large, medium, and small). This included 12 administrators from Nakhon Ratchasima (6 from secondary and 6 from primary education offices), 6 from Chaiyaphum (4 from secondary and 2 from primary education offices), 8 from Buriram (4 from secondary and 4 from primary education offices), and 6 from Surin (4 from secondary and 2 from primary education offices).
(2) Simple random sampling was then used to divide the 32 administrators into an experimental group of 16 and a control group of 16.

Research Instruments:

(1) A manual for the supervision model designed to enhance the competency in educational quality assurance for school administrators (developed in Phase 2).
(2) Instruments to assess the effectiveness of the supervision model, including a competency assessment tool for educational quality assurance for school administrators, developed in Phase 1.

Data Analysis:

Data analysis involves comparing the mean competency scores in knowledge, skills, and attributes of school administrators before and after using the supervision model. The analysis will be conducted using Multivariate Analysis of Variance (MANOVA) and Paired Sample t-test to evaluate the effectiveness of the supervision model.

3. Results

3.1 Phase 1: Identification of the conceptual framework and the components of competency in educational quality assurance for school administrators

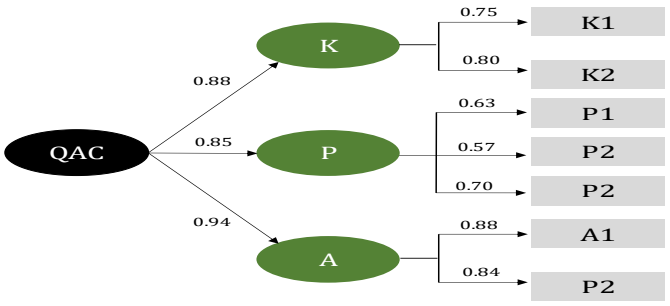

Figure 1: Competency Model for Quality Assurance in Education for Educational Administrators

Figure 1 shows an overall framework for quality assurance for educational administrators. First, the experts agreed that the components of supervision to enhance competency in educational quality assurance for school administrators consist of the 4A process: (1) Awareness for change (A1) , (2) Collaborative development (Action: A2), (3) Goal-oriented participation (Assessment: A3), (4) Sustainable holistic learning (Accreditation: A4)

Experts also agreed that the competency in educational quality assurance for school administrators includes three components:

(1) Knowledge: Knowledge in educational management and specific knowledge about educational quality assurance.

(2) Skills: Skills in educational management, specific skills related to educational quality assurance, and process skills in performing quality assurance tasks.

(3) Attributes: Appropriate attributes of school administrators and professional attributes recognized in performing educational quality assurance tasks.

From studying current practices, needs, and validating the competency model for educational quality assurance of school administrators, we found that the current practice of supervision to enhance competency in educational quality assurance for school administrators is at a moderate level overall ($\bar{x}$ = 3.42, S.D. = 0.44). The highest average is for Awareness for change ($\bar{x}$ = 3.44, S.D. = 0.70), followed by Collaborative development ($\bar{x}$ = 3.42, S.D. = 0.43), Goal-oriented participation ($\bar{x}$ = 3.42, S.D. = 0.47), and Sustainable holistic learning ($\bar{x}$ = 3.40, S.D. = 0.47). The need for supervision to enhance competency in educational quality assurance for school administrators is at the highest level overall ($\bar{x}$ = 4.73, S.D. = 0.62). The highest average is for Goal-oriented participation ($\bar{x}$ = 4.77, S.D. = 0.74), followed by Collaborative development ($\bar{x}$ = 4.74, S.D. = 0.63), Sustainable holistic learning ($\bar{x}$ = 4.75, S.D. = 0.60), and Awareness for change ($\bar{x}$ = 4.67, S.D. = 0.60).

The current competency of educational quality assurance of school administrators is at a high level overall ($\bar{x}$ = 3.51, S.D. = 0.46). The highest average is for Attributes ($\bar{x}$ = 3.58, S.D. = 0.83), followed by Knowledge ($\bar{x}$ = 3.48, S.D. = 0.45), and Skills ($\bar{x}$ = 3.47, S.D. = 0.71). The need to enhance competency in educational quality assurance for school administrators is at the highest level overall ($\bar{x}$ = 4.79, S.D. = 0.63). The highest average is for Skills ($\bar{x}$ = 4.81, S.D. = 0.71), followed by Knowledge ($\bar{x}$ = 4.79, S.D. = 0.70), and Attributes ($\bar{x}$ = 4.79, S.D. = 0.73).

The validation of the structural model of competency in educational quality assurance for school administrators using Confirmatory Factor Analysis (CFA) showed that the model aligns with empirical data. The Chi-Square value is 1.19, df = 3, p = 0.756, indicating no significant difference from zero. Other indices are RMSER = 0.00, RMR = 0.00, GFI = 1.00, AGFI = 0.99, and Chi-Square/df = 0.39, all indicating a good fit. Standardized factor loadings for observed variables are all significantly different from zero at the .01 level, with the highest loading for appropriate attributes of school administrators (bsc = 0.88), followed by professional attributes recognized in educational quality assurance (bsc = 0.84), specific knowledge about educational quality assurance (bsc = 0.80), knowledge in educational management (bsc = 0.75), process skills in performing quality assurance tasks (bsc = 0.70), skills in educational management (bsc = 0.63), and specific skills related to educational quality assurance (bsc = 0.57). The reliability coefficients (R2) for observed variables range from 0.42 to 0.77, indicating moderate to high levels of shared variance with the competency in educational quality assurance for school administrators.

3.2 Phase 2: Development of the Supervision Model to Enhance Competency in Educational Quality Assurance for School Administrators

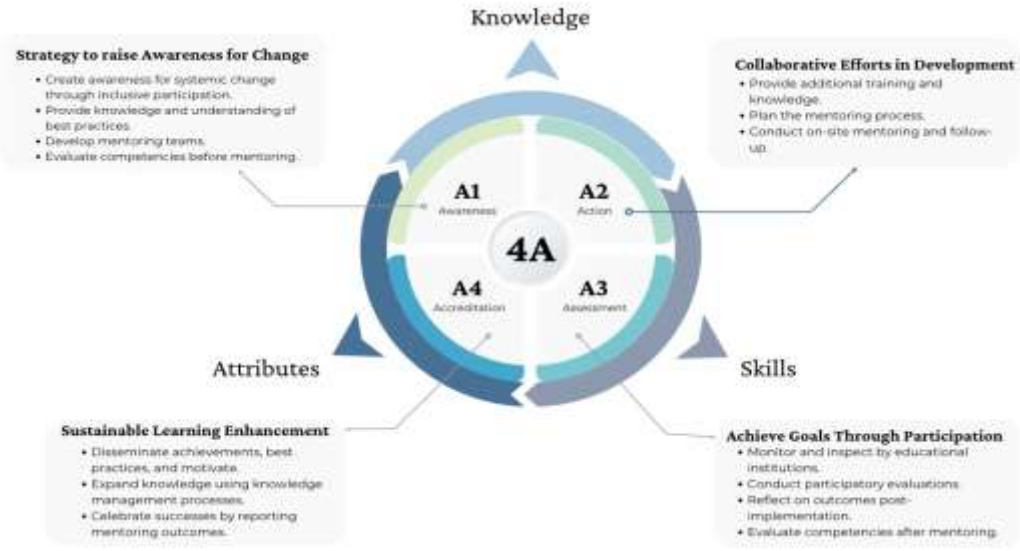

Figure 2: Supervision Model to Enhance Educational Quality Assurance Competencies

Figure 2 shows the supervision model summarized in this work. The development of supervision model to enhance competency in educational quality assurance for school administrators comprises 4 strategies and 7 tactics:

Supervision Strategies:
(1) Creating shared awareness for change.
(2) Collaborative development efforts.
(3) Goal-oriented participation.
(4) Sustainable holistic learning.

Supervision Tactics:
(1) Supervision through the use of supervision documents.
(2) Online seminar-based supervision.
(3) Online workshop-based supervision.
(4) Supervision through electronic media.
(5) Supervision through reflective knowledge exchange.
(6) Supervision using collaborative networks.
(7) Blended supervision (combining online and on-site methods).
These components collectively form a comprehensive supervision model aimed at enhancing the competency in educational quality assurance for school administrators (Figure 2). The evaluation of the supervision model by experts shows that, overall, it is rated at the highest level with an average score of 4.84 (S.D. = 0.18). When considering each aspect, the highest average score is for suitability, with an average of 4.92 (S.D. = 0.14). This is followed by usefulness, with an average of 4.87 (S.D. = 0.35), correctness, with an average of 4.84 (S.D. = 0.18), and feasibility, with the lowest average but still at the highest level, with an average of 4.79 (S.D. = 0.30).

3.3 Phase 3: Study of the Effects of the Supervision Model on Enhancing Competency in Educational Quality Assurance for School Administrators

In this phase, we found that school administrators in the experimental group who used the supervision model had significantly higher average competency scores in educational quality assurance compared to those in the control group, at a statistical significance level of .01. Additionally, school administrators in the experimental group had significantly higher average competency scores in educational quality assurance after using the supervision model compared to their scores before the experiment, at a statistical significance level of .01.

4. Discussion

The conceptual framework of the supervision model consists of four strategies: creating shared awareness for change, collaborative development efforts, goal-oriented participation, and sustainable holistic learning. The evaluation by the five experts indicated that these strategies are suitable for enhancing the competency in educational quality assurance for school administrators. This conceptual framework aligns with the idea of empowerment supervision, which involves supervisors, administrators, and teachers participating together in continuous and sustainable self-improvement and work development. This approach aims to develop educational quality to meet national education standards (Pummun, 2011).
The competency framework for educational quality assurance of school administrators includes three components with seven indicators: knowledge (knowledge in educational management and specific knowledge about educational quality assurance), skills (skills in educational management, specific skills related to educational quality assurance, and process skills in performing quality assurance tasks), and attributes (appropriate attributes of school administrators and professional attributes recognized in performing educational quality assurance tasks). The evaluation by the five experts indicated that this framework is suitable for measuring the competency in educational quality assurance of school administrators. These competency components align with the theoretical concept of quality in performance as described by Kanjanawasri (2003), which emphasizes performance quality as the achievement and desirability of outcomes expected by users. Phongkai (2006) developed indicators for evaluating performance in educational quality assurance within educational service areas, encompassing knowledge, skills, and personal characteristics that align with the components of this research.
The current practice of supervision to enhance competency in educational quality assurance for school administrators is at a moderate level across all four areas. This may be because the supervision practices from the central office have not sufficiently reached the local areas. Therefore, supervisors should establish policies and operational missions for enhancing the competency in educational quality assurance for school administrators. This includes creating supervision calendars, monitoring and evaluating programs directed by the Office of the Basic Education Commission, and raising awareness among administrators about the importance of quality assurance. Additionally, supporting and promoting educational quality assurance supervision will enable school administrators to supervise their educational staff effectively and efficiently. This finding is consistent with the research by Chaiwong (2017), Kenpho (2018), and Aroonma (2019), which found that schools with internal evaluation and supervision using performance evaluation results to inform

educational planning benefit significantly. The internal supervision evaluations help school staff identify strengths and weaknesses, leading to appropriate improvements and providing foundational data for future supervision efforts. This is also in line with Nummano (2019), who stated that evaluation is equivalent to development, involving evaluation and adjustment before, during, and after supervision, using the results to refine diverse supervision models. Similarly, Chaikliaeng (2019) studied blended supervision to promote research among secondary school teachers and found that teachers could create innovations to solve teaching and learning problems, benefiting students and contributing to sustainable educational quality.

The need for supervision to enhance the competency in educational quality assurance for school administrators is at the highest level across all three areas. This may be because systematic supervision in schools leads to more efficient operations. Implementing supervision results systematically and thoroughly, aligned with actual conditions and autonomy, benefits teachers, administrators, and schools. The Office of the Basic Education Commission (2012) studied the problems, needs, and supervision models conducive to improving educational quality, finding that the need for supervision is at the highest level. Emphasis should be on developing effective supervision models, using diverse and flexible processes like PDCA and PIDRE, which are practical and beneficial. This aligns with the developed supervision model consisting of four strategies: creating shared awareness for change, collaborative development efforts, goal-oriented participation, and sustainable holistic learning. It also matches Harris's (1985) five-step supervision process: planning, organizing, leading, controlling, and appraising. This is consistent with Kenpho's (2018) research, which found that the need for supervision to enhance critical thinking skills among science teachers in extended opportunity schools is at the highest level. Similarly, Nummano (2019) found that the need to develop English language teaching competencies for secondary school teachers is at the highest level.

The actual practice of competency in educational quality assurance of school administrators is generally at a high level. This may be because modern school administrators must be qualified, experienced, and align with contemporary leadership practices. They analyze problems, plan according to current situations, and adapt new ideas effectively. This is consistent with previous studies (Chorchit, 2016; Misri & Kanjanakas, 2020; Rodcharoen & Sujaritrak, 2019) which found that local schools with modernized practices showed high levels in assessments. This is another point indicating that school administrators are an importat factor in academia and must continuously develop themselves to manage effectively in a changing society. The administrators are crucial to the direction and well-being of the school and its staff. Developing competency in educational quality assurance is a vital tool for strong educational quality assurance operations, providing clear direction and utilizing knowledge for sustainable educational quality.

The structural validation of the competency model revealed that the model aligns well with empirical data and follows the hypotheses derived from the synthesis of concepts, theories, and related research on the components of competency in educational quality assurance for school administrators. The competency components also aligned with Kanjanawasri's theoretical concept of quality in performance, which includes three aspects: knowledge, and attributes (2003). This result supports the structured and continuous process used in developing the competency model, where data collection, analysis, and accuracy checks were rigorously conducted at each step using appropriate and quality instruments. The quantitative data collected for confirmatory factor analysis reflected the true characteristics of school administrators with competency in educational quality assurance, resulting in findings consistent with the studied concepts, theories, and related research.

Regarding the model development, the research found that all experts agreed that the developed model has highly beneficial, appropriate, feasible, and accurate components for improving the competencies of school administrators in educational quality assurance. This outcome may be due to the thorough process of studying the conceptual framework, analyzing current conditions and needs, and employing diverse methods to reach clear and verified conclusions by experts. In previous study, Chaiwong (2017) developed a supervision model based on the blended learning concept to enhance classroom research skills among teachers in Nakhon Phanom Primary Education Service Area Office 1. The research found that this blended learning supervision model has five components: principles, objectives, content, supervision process, and evaluation. The supervision process includes four steps: pre-supervision knowledge sharing, supervision planning, supervision implementation, and supervision evaluation and reporting. The developed model was found to be highly appropriate and feasible. Similarly, Kenpho (2018) developed a supervision model to promote critical thinking skills for science teachers in extended opportunity schools. The research found that the ARPED Model, which includes five main components (Assessment, Relationship building, Practice, Evaluation and improvement, and Development), was highly appropriate and feasible. Aroonma (2019) developed a supervision model to enhance learning management competencies in primary schools. The research found that the ROAD supervision model was highly appropriate, feasible, and beneficial.

After implementing supervision model, the experimental group had significantly higher average scores in educational quality assurance competency than those in the control group. This positive outcome may be due to the thorough development process of the supervision model, which involved studying relevant concepts, theories, and principles from related documents and research. Various data were analyzed to define goals and components of the model, and guidance was received from experts in multiple fields, resulting in an effective supervision model that is well-suited to the school context. This effectiveness led to improved competencies in educational quality assurance among the school administrators in the experimental group. Previous studies

also showed higher competency such as critical thinking skills, and understanding of learning management after supervision model intervention (Aroonma, 2019; Kenpho, 2018; Nuammana, 2019; Chaiwong, 2017).
Future research should continue conducting follow-up studies on the implementation of the supervision model to enhance competency in educational quality assurance for school administrators should be conducted to provide guidelines for developing both theoretical and practical aspects of the educational quality assurance system. Additionally, since the research found that the competency in educational quality assurance of most school administrators is at a moderate level, there should be ongoing comparative studies of this competency across different academic years. Design-Based Research (DBR) should also be conducted to make the design process of innovative supervision systematic and to foster a supportive supervision atmosphere between supervisors and supervisees, enhancing the competency in educational quality assurance for school administrators. Furthermore, tests should be conducted to determine the invariance of educational quality assurance competencies between public and private school administrators to provide guidelines for developing these competencies.

5. Conclusion

In conclusion, the research successfully developed a supervision model aimed at enhancing educational quality assurance competency among school administrators. The model, integrating the four strategic dimensions of Awareness, Action, Assessment, and Accreditation, and seven supervisory approaches, demonstrated significant improvements in the competency levels of the administrators involved. The model's effectiveness was validated through its implementation among 32 executives from secondary academic institutes in several Thai provinces, showing marked improvement compared to the control group and initial competency levels. High satisfaction rates among participants underscore the model's practical applicability and potential for broader implementation in educational quality assurance efforts.

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