

The Impact of Teacher Quality Management on Student Performance in the Education Sector: Literature Review

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Abstract

High-quality talents come from high-quality education and management, which largely depends on teacher quality. However, varieties of environmental forces are driving change in education, which impacts students' performance greatly. These challenges call for teacher quality management firmly on the agenda of all the school factors. Teacher quality in schools and institutions is one of the most important factors that influence student performance. This review paper aims to classify the connection between teacher quality management and student performance through three dimensions, namely classroom management, teacher qualification, and in-service training. In this literature review, the authors use past studies to certify the quality management and related theories that are used in vocational education. From this study, it reaches three conclusions: firstly, it can be concluded that school leaders can manage teacher quality through the supervision of classroom management, teacher qualification and in-service training. Then, it tries to highlight the significant relationship between teachers' classroom management. Finally, it focuses on enhancing teacher quality according to quality management criteria, it is a practical and effective strategy to cultivate qualified students. This research will help the leaders realize the importance of teacher quality management and strategies that improve teacher quality, thus impacts on student performance.

Keywords: quality management, teacher quality management, student performance, classroom management, teacher qualification, in-service training

I. Introduction

Quality is a key parameter that determines the social significance of education, which encompasses the economic, social, cognitive and cultural aspects of education and can be seen as an integral feature of the outcome of educational activities. It covers all key functions and areas of activity, including quality of personnel, educational programs, training of students, infrastructure of higher education institutions (Jamoliddinovich, 2022). With the current globalization and the rapid development of the knowledge-based economy, high-quality graduates have become the pillar of the national economy and made great contributions to the development of the country (Gulden, Saltanat, Raigul, Dauren & Assel, 2020).

However, mobile phone dependence has become a "new pain point" in education (Zhu, Bei & Song, 2022) as students are addicted to mobile games, leading to students' studying passion fades, and failure by the wayside (Ding, 2021). In the classroom, learning atmosphere was adversely, learning disciplines are broken, and self-discipline as well as internal driving force are lacking of (Liu & Ye, 2022), which call for high-quality teachers to change the situation.

In fact, educational authorities and institutions in various countries formulate various relevant policies to cultivate competent and effective teachers (China, Canada, India, Australia, Nigeria, etc.). The United States had carried out a series of explorations to improve the quality of teachers (Wang, 2021). Bush's No Child Left Behind (NCLB) Act and Obama's Race to The Top (RTTT) address four broad areas: academic standards, data and accountability, teacher quality, and turning around low-performing schools (Kraft, 2018). In recent decades, the Chinese government has also introduced a series of reform measures to improve the quality of Chinese higher education. The No. 8 Letter of the Office of Teachers (2022) and Plan for improving the Quality of Teachers in Vocational Colleges and Universities (2021-2025, etc.). To ensure that the young generation can meet the challenges of rapid changes in the era of globalization and IT, it is of great significance to explore relevant teacher management methods and strategies to improve teacher quality.

When it comes to quality education, previous research reveals that various quality management models have been introduced (Martens &

Prosser, 1998). It is important to focus not only on quality assurance but also on quality enhancement, that is, overall improvement of the actual quality of teaching and learning through more innovative practices (McKay & Kember, 1999). The main challenge facing vocational education is how to manage, secure, and develop quality (Wiesner & Yuniarti, 2018). However, the quality management environment is not sound, and the evaluation system, the guarantee system, and the mechanism are not perfect. (Zhou, 2022). Besides, teachers are rarely involved in the design of quality assurance systems (Lucander & Christersson 2020) which makes it difficult for teachers to grasp students' expectations of teacher quality. The problems faced in teacher cultivation include a lacking dynamic teachers' training quality; failure to deal with the problems existing in the teacher's cultivating process and a quality management constraint mechanism not being established (Yang, 2020).

Therefore, this study is to propose the relationship between quality management and teacher quality and to study the influence of teacher quality on student performance from the perspective of quality management.

2. Literature Review

Quality Management in Education

Quality as a concept has changed over the years and various researchers define quality in different ways and perspectives. Edward Deming (1986) defined quality as a kind of predictable degree of consistency and dependency, based on the accuracy of the beneficiary's use. Feigenbaum (1991) proposed that quality was a comprehensive concept, which should be considered together with strategy, quality, price, cost, productivity, service, human resources, energy, and environment. Researchers regarded quality as meeting the standards and requirements expected by the customers (Prakash, 2018) or the character and quality of goods and services that meet implicit and explicit customer needs (Alzoubi et al., 2019). Management is defined as "the act of running and controlling a business or similar organization and the skill to deal successfully with people or situations" (Oxford Dictionary, n.d.). However, this business-relevant definition of management needs further exploration as the word "management" in business has evolved from multiple national languages and also varies depending on the researchers. Lenin (1958, Volu.36, P559) held the view that "the basic principle of management is that a certain person is fully responsible for a certain work in charge. Doyle (1986) regarded it as a prerequisite for teaching and a necessary condition for making teaching possible. It is also a process of integrating unrelated sources into a total system to accomplish goals through planning, organizing, leading, controlling, and staffing functions (Northouse, 2021).

As a kind of management mode, quality management is one of the most concerning areas for managers, practitioners, and researchers. Quality management is the effective management of all processes within an organization, the prevention of problems rather than failure detection (Gulden & Assel, 2020). Quality management focuses on "people-oriented", seeks for "economic benefits" and pursuing "overall coordination" (Guo 2020). It is described as a system or a series of functions or some specific activities carried out in an organization to gain a certain goal (Nillson Orsini, 2013). Besides, quality management is an organizational management approach that is quality-centered, based on the participation of all members, with the goal of customer satisfaction, and benefits all members of the organization and society, and thus achieves long-term success (ISO 8402, in Wiklund et al., 2003:99).

Quality management in education administration has been attached great importance by both regulatory authorities and academic analysts (Basami, 2022). The role of quality management in education is to provide the model for the continuous development and improvement of organizational performance, which is reflected in the increased satisfaction of students, teachers, parents, principals and community members in education. The education quality indicator system helps school administrators to emphasize the important areas of their own activities, which are related to development strengths, weaknesses and opportunities. Members of the committee were responsible for quality control within schools and analyzed strategies to improve indicators on a case-by-case basis. Therefore, priority is given to maintaining and adapting the attributes of service quality, such as the quality of teaching and learning process, the quality of faculty, the quality of planning, and the quality of information management (Tzafilikou, Măță, Curpănar, Stoica, Voinea & Șufaru, 2022).

The quality management of general educational institutions affects all its constituent structures: objectives, functions, technologies, organizations, information, norms and standards. In the school environment, the quality management of education can follow the quality management of education process and the quality management of education development. The overall goal of school quality management is to achieve higher quality teachers, courses and projects, teaching quality, teaching methods and teaching control (Kurbanov, Sirojiddinova, 2021). The quality improvement of education is to make every student become a useful talent in society in the future, which must be carried out continuously (Jin, 2019). In addition, the role of the quality management system (QMS) of higher education institutions is cultivating the attributes of successful employability of graduates, and made it an important factor to improve students' employability (Kumari & Al-Rahmi, 2021).

Therefore, to some extent, coordinating the whole system is an organizational management effort, where departments, divisions, academic deans, university and college administrators, and teaching staff strive to achieve the mission and objectives of the organization in a coordinated and relaxed working environment to ensure the quality of education (Gulden & Assel, 2020). Therefore, effective management is a guarantee of quality education.

Quality Management in Vocational Education

Quality assurance in vocational education is related to the business philosophy of total quality management which is a management philosophy that seeks to effectively meet the needs and expectations of stakeholders without compromising ethical values.

In vocational education, the implementation of TQM should start with a quality policy and the establishment of an organizational structure to manage and encourage the achievement of quality through teamwork. It is important that all workers are trained in quality assurance methods. Evaluation at all levels, including consumer perception, is equally important (Offiong, Okon & USEN, 2016).

The quality management system of vocational education is a system to ensure the realization of quality goals of vocational education, achieve quality standards and carry out quality work (Wiesner & Yuniarti, 2018). Vocational education is facing many challenges and the main one is on how to manage quality, guarantee quality and develop quality which is pushing vocational education institutions to provide quality workers with skilled personnel (Gatt, & Faurshou, 2016). Customers always want to achieve great achievements and satisfaction through excellent service. Djatmiko(2016) pointed out that a quality management system is a foundation for building an efficient vocational education system, and training talents with dedication, commitment, and professionalism. Therefore, vocational education institutions must set up high standards and introduce a suitable quality management system (Wiesner & Yuniarti, 2018).

Rong (2022) analyzed the root cause of the lack of attractiveness of vocational education from the inside, and the problems existing in the teaching quality of vocational education and discusses the reasons, and then put forward the corresponding suggestions to promote the improvement of the quality of vocational education personnel training and enhance the attractiveness of vocational education. Scientific design of vocational education quality management system. It was suggested that design a scientific, comprehensive and in line with the law of vocational education talent training evaluation system was important, including evaluation content, evaluation standards, evaluation methods, etc. With the application of TQM standard rationally, establish scientific feedback mechanism, and promote quality improvement through evaluation.

According to Moja (2005), it was the systematic monitoring and associated feedback of processes that provide error prevention and quality assurance. This required an examination of vocational education quality assurance indicators such as teaching quality, laboratory and workshop facilities, library facilities, teacher quality, student: teacher ratio, teaching facilities, staff accommodation, staff development, school environment, remuneration and funding and their impact on vocational education in Nigeria. Niu (2019) stated that higher vocational colleges should change the concept of teaching quality management, formulate scientific and reasonable teaching quality management methods to solve these problems, improve the management ability of managers, and train technical talents with professional technical ability and innovative consciousness. Therefore, colleges and universities must attach importance to the guidance and training of teaching quality management personnel in higher vocational colleges, formulate a reasonable teaching quality management mechanism, stimulate the work enthusiasm and innovative spirit of managers through various ways, and then promote the smooth progress of teaching quality management in colleges and universities.

Li (2018) analyzed the present situation and existing problems of the teaching quality management in China's higher vocational education, put forward the principles of constructing the teaching quality evaluation system of higher vocational education, and constructs the teaching quality evaluation system of "four parties participating and four kinds of evaluation" under the guidance of scientific quality management concept and the means of modern information technology.

Business Concepts of Quality Management in Education

Beeby (1966) in his landmark book "Quality of Education in Developing Countries" divides quality education into three levels: quality of the classroom; serving the economic goals of the learners and the communities; judged by broader societal standards. Teacher development and preparation are considered key to the quality of education. Beeby's "stages of development" model is a good system to assess education quality. It is believed that the first ranking factor that affects the quality of higher education is the professionally qualified teachers, infrastructure, equipment, and support services.

Liu (2017) concluded five factors that affect educational quality, namely, operational principals, teachers and the utilization of facilities for teaching, teaching reforms, education management, and learning outcomes. Therefore, quality assurance frameworks are recognized as systematic mechanisms for the improvement of the quality of research, innovation, and education to gain national targets within established standards (Davidson et al. 2020). Jamoliddinovich (2022) concluded the key areas of quality education, include quality of staff, education programs, training of students, and infrastructure of higher education institutions in the changing process of the whole continuing education system.

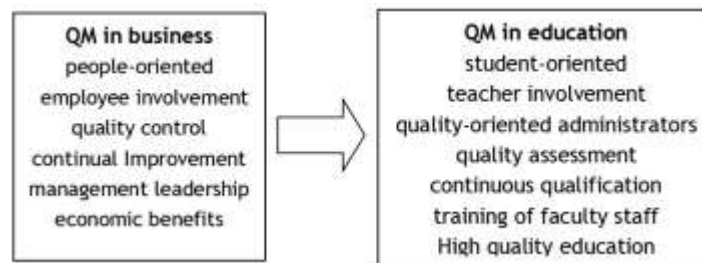


Figure 1. Business concepts of quality management in education

Source: (Gulden, Saltanat, Raigul, Dauren & Assel, 2020)

Teacher Quality Management

Instructors are the most important educational resource (Aina & Olanipekun, 2013) and effective staff is the most important condition for the success of educational institutions (Kurbanov & Sirojiddinova, 2021). In other words, teachers are an important guarantee of the quality of education. Only high-quality teachers can cultivate high-quality students and run high-quality education (Zhou, 2022). Therefore, it is of great significance to explore relevant teacher quality management methods and strategies to improve the quality of education teachers.

The management function of teachers includes a group of tasks: personnel policy, staff selection, assessment and certification, training, and placement of management personnel (Kurbanov & Sirojiddinova, 2021). Teacher performance guidance management has been implemented in the daily work activities of school teachers through planning, organization, implementation, supervision, and other aspects of management functions (Nurjannah & Kosasih, 2021). The variables used to measure teacher quality include academic ability, years of education, years of teaching experience, subject and teaching knowledge, certification status, and classroom teaching behavior. Researchers and policymakers generally look to two areas as candidates for describing teacher quality :(a) teacher input, including teacher characteristics, professional preparation, and licensing; (b) classroom effectiveness (Heck, 2007).

The assessment of the efficiency of teachers on abilities in classroom behavior and interpersonal skills are important to maintain appropriate classroom management. It is essential to note that the instructors are responsible for a large portion of the responsibility in establishing the level of education that the children get (Ojo, 2018). Li (2016) summarized four quality management measures of British primary school teachers in her study, namely pre-service teacher training, the recruitment of teachers, the strengthening of in-service teacher training, and the construction of the evaluation mechanism.

Zhang (2019) put forward his conception of constructing a teacher quality assurance system. Four-level goal system of the school-second level department - professional -teacher", establishing the teacher development standard and incentive improvement and quality assurance accountability mechanisms. Nan Gang (2021) concluded five main strategies for the construction of high-quality teachers. First, strengthen the construction of teachers' ethics and reshape the teacher spirit. Second, focus on pre-service and post-service integrated training, and build a whole-chain high-quality training system. Third, deepening reform of the teacher management system and modernizing the management of teachers. Four, make up the weak points and consolidate the foundation of high-quality teachers. Five, improve the system and build a strong defense line of high-quality teachers.

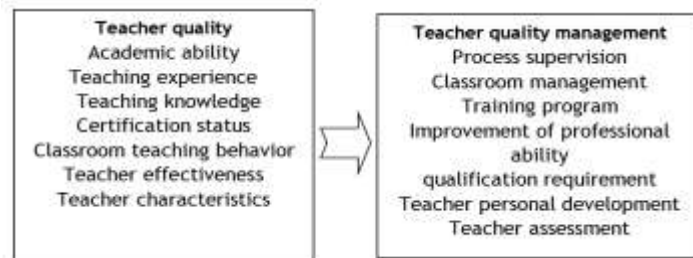


Figure 2. Content of teacher quality management

Source: (Gulden, Saltanat, Raigul, Dauren & Assel, 2020)

Student Performance

In general, the measurable of graduates' performance include six learning competencies: communication, technical competence, critical thinking and problem solving, professional skills, teamwork and leadership. In other words, the high-qualified graduates should have the ability to communicate effectively in professional and social settings; the ability to use modern technology to obtain information, communicate, solve problems and produce desired results; the ability to reason logically and creatively make wise and responsible decisions and achieve desired goals; the ability to effectively perform professional duties in a local and international environment; the ability to work effectively with others to accomplish tasks and achieve team goals; the ability to be an informed, effective and responsible leader in family and community (PMU, 2020). Specifically, student's performance in the classroom refers to the self-control, completion of the assignments on time, ability to understand the concepts, effective communication, attendance rate, norms and principles (Kapur, 2018).

Students' academic performance is influenced by different factors such as socioeconomic status, family climate, interpersonal network, school type and training facilities, and teacher-student interaction, which lead to a range of learning problems (Yarahmadi, 2012). Some researchers focus on effort, demographic variables (education, income, age, marital status), self-motivation, social relationships (student-class partnerships, student- lecturer relationships), individuals (work experience, skills), and organizations (location, work climate, technical facilities) (Çılan, Can, 2014). Hamoud & Awadh (2018) investigated a model based on decision tree algorithm according to the performance and put forward the factors including health, social activities, interpersonal relationships and academic performance related to and influence student achievement. Other researchers concluded that high school background, personality, family background, academic/ education situation, behavior, performance, and effort expectation influence student performance through students' attitudes (Barhamzaid & Alleyne, 2018).

The Application of Quality Management theory in Education

The application of the ISO series in Education

Over the past three decades, the International Organization for Standardization (ISO) has been promoting and advocating the standardization of quality management systems and their requirements in almost all technical and operational areas. ISO series is considered to be a standard suitable to meet the needs and requirements of higher education organizations. As a result, a large number of higher education institutions have induced the confidence of their stakeholders by implementing the ISO series in their systems (Hussein & Khachfe, 2017). The ISO quality management system includes eight principles of quality. They are Customer focus; Involvement of People; Process Approach; Continual Improvement; Mutual Beneficial Supplier Relationships; Leadership; System Approach to Management; Factual Approach to Decision Making.

Rodríguez-Mantilla, Fernández-Díaz & Carrascosa (2019) compared two variables in analytical research between management leaders and teachers on the influence of ISO 9001 standards in educational centers. The findings showed that the implementation of the school quality management system would have a great effect on different fields. Legowo (2019) develop a unified model of a quality assurance system for ISO-certified higher education institutions. There are seven accreditation Standards for Higher Education Institutions to considerate the ISO system: 1) Vision, Mission, Goals, and Achievement Strategies; 2) Governance, Leadership, Management system, and Quality Assurance; 3) Students and Graduates; 4) Human Resources; 5) Curriculum, Learning, and Academic Atmosphere; 6) Financing, Facilities and Infrastructure and Information System; 7) Assessment, Service and Cooperation. Similarly, Rodríguez-Mantilla, Fernández-Díaz & Carrascosa (2019) in their study sum up nine ISO 9001 standards: improve education to participate in decision-making; Improve the management process; Increase the productivity of the center; Systematization of the working process; To manage actions aimed at organizing and structuring activities; Implementation of suggestions and complaints management measures; Evaluation of education group satisfaction and employee satisfaction; Use the results of these evaluations to develop improvement plans.

Kansal (2022) analyzed the Quality Management system (QMS) practices implemented in ISO 9001 certified Indian engineering education institutions between two groups in the four (4) hotel technical institutes in Alexandria. Results showed that group B organizations scored significantly higher than Group A organizations and there were significant differences in the quality management system practices implemented between group A and Group B respondents.

Abbas & Mahdi (2022) identified the availability of the provisions of the international standard (ISO 21001) in the observation and application of the faculties of basic education. The results showed that the projects met and achieved (medium availability) levels, some projects did not meet the required level of the acceptability Standard (2) set by the investigator, and the researchers concluded that the (ISO 21001) standards are important international credentials for higher education.

Syahrulla, Yanti, Adhiana & Imran (2022) investigated the gaps between the current quality assurance system for higher education and the Education Organization Management System ISO 21001:2018, and to determine the level of readiness obtained by College X to meet the requirements of ISO 21001:2018. The result showed 59% of the ISO 21001:2018 provisions have been completed and 41% of the requirements still don't meet AIMA standards. The readiness rate for the implementation of the education organization ISO 21001:2018 management system in School X is 73%, showing the needs to improve the quality system in preparation for ISO 21001:2018 quality assurance.

Theory of Plan-Do-Check-Act (PDCA)

PDCA (Plan-do-check-ACT for short) cycle quality management was proposed by American scholar Edwards Deming, also called the Deming ring. PDCA, a quality management system widely used in the service and manufacturing industries, is a tool for continuous improvement, consisting of four steps: planning, execution, inspection, and action, with repeated stages forming a circle (Isaiah, Purba & Debora (2020).

The PDCA approach facilitates continuous improvement without interruption, which is in principle more future-oriented, flexible, logical, and reasonable, and contains a description of all the elements of the plan developed (Schneider, 1997). The four steps are as follows: planning, doing, inspection, and action (Schneider, 1997). The PDCA cycle generates corrective, temporary, and permanent actions. (Jagtap & Teli, 2015).

Feng (2021) took quality management as the perspective, the PDCA cycle management model as the theoretical framework, and the H project as the case, deeply discussed the operation and management of the dual tutorial system in the excellent teacher training program. Maruyama & Inoue(2016) applied the plan-do-check-act (PDCA) cycle to the leadership education of engineering graduate students, and the quality of education programs has been continuously improved for seven years and the PDCA cycle leads to student achievement in producing effective leadership behavior. Loyd & Gholston (2016) applied a learning approach based on the PDCA cycle in higher science and engineering teaching in response to the growing gap between traditional teaching methods and the needs of today's college graduates. Zhao, Zhang,

Zhao, Zhang, Fan & Wang (2022) aimed to explore the effectiveness of online teaching management of nursing students based on PDCA (Plan-do-Check-ACT) cycle management during the novel coronavirus outbreak, and provide reference for further improving online teaching management. With the method of cluster sampling, 151 nursing students in a school were selected as the research objects, and PDCA circulation management network teaching was applied. The results showed that PDCA cycle was beneficial to improve the

autonomous learning ability and self-efficacy of nursing students, effectively improve the quality of online teaching, and provide reference for blended teaching quality management in the post-epidemic era.

Huang & Wongthai (2019) proposed the design of a plan-Action-check (OISC) on-line information system to assess the learning of Taiwanese kindergarten students. The design was equipped with current technology and provided details of all the components and technologies which helped teachers work more effectively and served as an example of adopting e-education methods to assess and improve students' learning performance.

Gurung, Gurung & Wannasri (2020) used PDCA (Plan-Do-Check-Act) model to study the management of scouting projects with 178 scout leaders and 4 Scout experts to strengthen the guidelines for the management of scouting activities in schools. The results showed that the overall recognition level of the respondents to the scouting project management is at the same level and there was no significant difference in the gender and rank of scout leaders among all schools. Strengthening the guidelines of school scouting management was the most urgent task to strengthen school scouting which has profound implications for the development of guidelines for improving reconnaissance programs using the PDCA(plan-Do-Check and Action) model.

Total Quality Management (TQM)

Total Quality Management (TQM) is a term that was first put forward by the famous American expert Feigenbaum in the early 1960s and then gradually developed and matured with the development of social production. It is the continuous improvement of management level and today has turned into a piece of the corporate on a worldwide scale and many organizations have encountered changes to overall quality management. The goal of total quality management is quality, not only in the final stages of production but also in all agency processes, and it is a concept that permeates all agency functions (i.e. marketing, accounting, finance, human resources, public relations and management) while covering all employees and instilling accountability. Therefore, it is important to use the concept of total quality management in educational institutions to produce qualified people who can meet the needs of both individuals and society. (Sucuoğlu & Erdem,2021).

When applied to the context of education quality, achieving quality by implementing TQM requires commitment and good cooperation among all school members (Jariah, A. 2021). As UNESCO points out in "Learning to Survive", "recent experiments had shown that new management procedures in many industrial systems can be practically applied to education." To improve the quality of education and satisfy different stakeholders, educational institutions have adopted TQM practices. It is a meaningful quality standard for education that provides a philosophy of continuous improvement and provides each educational institution with a set of practical tools to meet the present and future needs, wishes, and expectations of its customers (Sallis, 2015).

The practice has proved that total quality management has a great role in promoting the level of education management (Ni, Chen & Qin, 2019). The important role of TQM in education is to enable teachers to improve students' learning content and learning style (Mädälina Militaru 2013) through this quality control approach, which aims to make teachers and graduates qualified and competitive (Jariah, A. 2021). In China, Shandong University has carried on the reference to the idea of total quality management (TQM), and introduced the ISO9000 quality management standard to construct the teaching quality monitoring system of colleges and universities (He, 2004).

Abd (2021) investigated the recognition of the possibility of applying total quality management in the management and organization of science departments from a faculty perspective. The result showed the level of statistical significant difference at (0.05) in the degree of application of comprehensive quality in the management and organization of scientific department heads.

Shah, Birohi & Tunio (2021) investigated the preparation of public universities in Khairpur district with a view to implementing total quality management practices which should contribute to the implementation in terms of wider development. The results showed the focused independent variable efficiency, namely customer attention and satisfaction, is positively correlated with TQM practices.

Kamrat,Wisedsang & Pitprasert (2022) studied the level and effectiveness of TQM in schools of Surin Primary School Education Service District Office and investigated the relationship between TQM and school effectiveness. The findings showed that the overall quality management level and school effectiveness were at a high level (= 4.36). It also showed the positive relationship between the total quality management and the school effectiveness at a high level with the statistical significance at the level of .01.

Table 1. Theoretical Review of Quality Management

Theories	Title	Author	Aims
ISO 9001:2015	Validation of a questionnaire to evaluate the impact of ISO 9001 Standards in schools with a Confirmatory Factor Analysis	Rodr ́guez-Mantilla, Fern ́andez-D ́az & Carrascosa (2019).	To evaluate the impact of ISO 9001 Standards in schools.
Total Quality Management (TQM)	The Collaborative Strategy of Total Quality Management and School Governance to Improving Effectiveness of Vocational School-Based Enterprise.	Khurniawan, Sailah, Muljono, Indriyanto, & Maarif (2021).	To design a strategy to increase vocational school-based enterprise effectiveness by implementing school governance (SG) and total quality management (TQM).
Theory of Plan-Do-Check-Act (PDCA)	Construction and Implementation of Vocational Education Teaching Quality Standard Based on PDCA Cycle Theory	Lan Jia (2022)	To explore the effective path of the construction and implementation of vocational education teaching quality standard from the four links of "planning", "do", "check" and "act".

Table 2. Empirical Review of the Application of Quality Management Theories

Theories	Title	Author	Aims	Findings
Theory of Plan-Do-Check-Act (PDCA)	Effective Management of School Scouting Program by Applying Plan-Do-Check-Act Model	GURUNG, Gurung & Wannasri (2020).	To study and compare the management of the scouting program in schools and to study the guidelines to enhance the management of the scouting program in schools in Bhutan.	The overall level of agreement on the management of the scouting program was at an agreed level. The guidelines to enhance management of the scouting program in schools had been found imperative to strengthen the school scouting program.
Theory of Plan-Do-Check-Act (PDCA)	Application of the Plan-Do-Check-Act Cycle to Quality Management of Online Teaching for Nursing Students in China During the COVID-19 Pandemic: A Self-Controlled Trial	Zhao, Zhang, Fan & Wang (2022).	To explore the effectiveness of online teaching management for nursing students based on (PDCA) cycle management during the COVID-19 pandemic, and provide reference for further improving online teaching management	PDCA cycle is beneficial to improve nursing students' self-learning ability and self-efficacy, effectively improve the quality of online teaching, and provide reference for hybrid teaching quality management in the epidemic era.
Theory of Plan-Do-Check-Act (PDCA)	Quality Diagnosis and improvement of vocational Mass Entrepreneurship Education Curriculum based on PDCA cycle theory	Liu Chanliang (2021)	To analyze the key factors and diagnostic indexes that affect the curriculum quality of entrepreneurship and innovation in higher vocational colleges based on PDCA cycle	It combed out 27 key factors that affect the quality of curriculum construction of entrepreneurship and innovation education in higher vocational colleges factors and diagnostic indicators based on PDCA cycle theory.
Total Quality Management	Efficiency Measurement of Universities in Sindh through Total Quality Management Practices	Shah, Khaskheli, Alkilan, Birohi, & Tunio, (2021)	To investigate the preparation of public universities in Khairpur district with a view to implementing total quality management practices	Customer attention and satisfaction, is positively correlated with TQM practices, while a weak correlation between performance and the performance of Shah Abdul Latif University.
Total Quality Management	The Possibility of applying the Objectives of total quality management in the management and Organization of Scientific Departments in Iraqi Universities	Abd Kata'a poisons. (2021).	To recognize the possibility of applying total quality management in the management and organization of science departments from a faculty perspective.	It determined the level of statistical significant difference at (0.05) in the degree of application of comprehensive quality in the management and organization of scientific department heads.
Total Quality Management	Relationship between Total Quality Management and Effectiveness of the Schools under Surin Primary Educational Service Area Office 3	Kamrat, Wisedsang, & Pitprasert (2022).	To study the level and effectiveness of TQM in schools of Surin Primary School Education Service District Office and the relationship between TQM and school effectiveness.	The findings showed the relationship between the total quality management and the school effectiveness was positive and at a high level with the statistical significance at the level of .01.
ISO Series	The Adoption of ISO 9001 Quality Standard in Hotel Technical Education Institutions in Alexandria: Staff Members Perspective	Kansal, (2022).	To analyze the Quality Management system (QMS) practices implemented in ISO 9001 certified Indian engineering education institutions.	Group B organizations scored significantly higher than Group A organizations and there were significant differences in the quality management system practices implemented between group A and Group B respondents
	The availability of the provisions of the	Abbas & Mahdi (2022).	To identify the availability of the provisions of the	The projects met and achieved (medium

ISO Series	International Standard (ISO 21001) in the observation and application of the faculties of basic education		international standard (ISO 21001) in the observation and application of the faculties of basic education	availability) levels, some projects did not meet the required level of the acceptability Standard (2) set by the investigator, and the researchers concluded that the (ISO 21001) standards are important international credentials for higher education.
ISO Series	GAP analysis of Higher Education Quality Assurance System Implementation against Educational Organization Management Standards ISO 21001: 2018.	Syahrulla, Yanti, Adhiana, & Imran, (2022)	to identify the gaps between the current quality assurance system for higher education and the Education Organization Management System ISO 21001:2018, and to determine the level of readiness obtained by College X to meet the requirements of ISO 21001:2018.	It showed 59% of the ISO 21001:2018 provisions have been completed and 41% of the requirements still don't meet AIMA standards. The readiness rate for the implementation of the education organization ISO 21001:2018 management system in School X is 73%, showing the needs to improve the quality system in preparation for ISO 21001:2018 quality assurance

3. Discussion

Teacher Quality Management by Teacher Qualification

Principals should encourage improvement in the quality of management within the school to implement a learning process that motivates students to achieve high academic results. In order to support the expected development of school conditions, at least the principal can determine the direction of change, coordinate the working relationships of people in the school, and increase the motivation for achievement (Mulyadi, Wasliman & Sauri, 2022). A growing number of researchers and educationalists have attempted to study the relationship between educational management/administration and teacher quality.

Musa & Sa (2020) studied the correlation between high school teacher supply and teacher efficiency in Nigeria among 369 teachers. The results showed that there was a significant positive correlation between teacher qualification, teacher experience, and teacher efficiency. It was advised that education administrators were supposed to take the teacher qualifications into account when recruiting and placing national senior secondary teachers. A study conducted by Leibur, Saks & Chounta in 2021 studied the qualification process for Estonian Professional Standards, which was used to determine the professional level of teachers. Based on this study, it can be said that teachers who went through the application process gained greater confidence, valued their value as teachers more, and continued on-the-job training. (Leibur, Saks & Chounta, 2021). Researchers like Casian, Mugo & Claire (2021) suggested that the Ministry of Education should continually review and improve methods to standardize the level of teacher qualifications and improve the performance of educational quality through academics. Education planners are supposed to make arrangements to improve the management of teachers' qualifications so as to produce effective teaching methods and the quality level of students. The person in charge of the school should strive to improve the teacher qualification, so as to enhance their professional spirit and teaching performance.

Similarity, a study aimed at examining the impact of teacher qualifications on student academic performance advised that education planners are supposed to make arrangements to improve the management of teachers' qualifications to produce effective teaching methods and the quality level of students. The person in charge of the school should strive to improve the teacher qualification (Casian & Claire, 2021).

At the meantime, Awuor (2021) carried out research to establish the influence of teacher qualification and teacher quality on mathematics teaching quality. The results showed significant differences in the qualifications of teachers, with master's degree holders performing best. The findings may be helpful to policymakers, teachers, and principals and suggested that teachers with Master's qualifications in Mathematics education were recommended to serve as trainers (Awuor, 2021).

Some researchers focused on the gatekeeper and qualification of teacher quality management. Musa & Sa (2020) studied the correlation between high school teacher supply and teacher efficiency in Nigeria among 369 teachers. The results showed that there was a significant positive correlation between teacher qualification, teacher experience, and teacher efficiency. It was advised that education administrators were supposed to take the teacher qualifications into account when recruiting and placing national senior secondary teachers. Other researchers like, Ahmad, Shaheen & Hussain (2022) analyzed the current teacher recruitment policy decisions in Khyber Pakhtunkhwa Province to replace pre-service professional qualifications. Their study found that the current teacher recruitment policy was not in line with any previous national education policy in Pakistan, nor was it in line with the National Education Policy 2017. It was recommended that the current school-level teacher recruitment policy in Khyber Pakhtunkhwa be revised to bring it into line with the National Education Policy 2017 to ensure the quality of education in Pakistan. Abe's (2014) study showed a significant differences in the performance of students

taught by professional teachers and non-professional teachers and suggested that only qualified maths teachers should be allowed to teach maths at the secondary level and holders of the Nigerian Certificate of Education (NCE) should be allowed to continue their education. Teachers without a teaching qualification should also be recommended to pursue a Postgraduate Diploma in Education (PGDE) which may improve their teaching methods to improve students' math scores.

Teacher quality management by In-Service Training

To certify the impact of teacher development programs on teacher quality and effects on student performance after in-service training, some researchers make efforts to investigate the relationships between them. Pharis and Moore (2019) used a data collection method of surveys and interviews to gather the views of teachers and principals on improving teacher quality. The results showed that 66.6% of teachers responded that professional development is necessary for student growth goals. They felt that the student growth goals were more specific than the previous student achievement goals, and teachers needed more training specifically for the development and implementation of goals. Based on the previous finding, Mugoya & Mwangi (2022) stated that teachers with good communication skills, explanatory skills, and writing skills facilitated effective history teaching and learning. It was recommended in the research that the government and relevant parties develop a "Continuous Development Plan for Teachers" and an "in-service Plan" to improve teachers' communication, explanatory, and writing skills to fill the gap in teaching.

Some researchers explored the effect of in-service training on teachers' performance. It was accepted that the performance of teachers in terms of professional skills, knowledge, and experience can be significantly improved through the implementation of certain in-service training programs. The results of the study showed that the in-service training programs had a positive impact on teachers' job performance and teachers' positive perception of professional growth. (Junejo & Ahmed, 2018). Based on the study that was conducted by Nzairwehi (2019), in-service teacher training had a significant impact on teachers, especially on their education, performance, and professionalism. However, these benefits could only be achieved if training is properly planned, implemented, and continuously evaluated, with certain resources and incentives. The researcher recommended reviewing teacher training methods and improving school environments to facilitate the process of teaching and learning. (Nzairwehi, 2019).

Other researchers emphasized the plan and arrangement of in-service training programs for teachers to improve their quality. The Chinese researcher, Yang (2020) studied the basic, developmental, and systematic requirements of teacher training and quality management in higher vocational colleges in his research. He suggested that teacher training should be combined with the actual needs of professional education and talent training and formulate scientific and reasonable development plans and quality objectives for training objects. Akudo (2022) aimed to find out the extent to which teachers participate in continuous in-service training programmes to improve their work efficiency in secondary schools in Anambra State. The findings of the study revealed that teachers' participation in various continuous in-service training courses improved their productivity to a low degree and suggestions on high school principal is to hold seminars, workshops, counselling and commission to improve the work efficiency of schools. Ehinola & Akomolafe (2022) examined in-service curriculum and guidance as determinants of teacher job performance in public secondary schools. The result showed that in-service courses were significantly related to teachers' performance. There was a significant relationship between mentoring strategies and teachers' job performance. Based on the results, we conclude that both in-service and mentoring strategies contribute positively to the job performance of public secondary school teachers. It was recommended that governments encourage teachers to participate in competency training both inside and outside schools by providing financial assistance and appropriate recognition to participants.

Teacher's Classroom Management Influences Student Performance

Teachers with a good command of classroom management are the capital for the success of a learning activity (Sholeh, et al., 2021). There are significant differences in classroom management techniques and their impact on student academic performance (Omoruyi & Aigbeedion, 2015).

Studies on teacher's classroom management skills that related to student performance are under discussing by researchers. A study by Orakwue in 2020 investigated the classroom management strategies used by lecturers in higher education institutions in Nigeria. Findings from 250 respondents showed that the lecturers were not effective as expected in classroom management. Researchers suggested that leaders should provide lecturers with growth opportunities, such as in-service training or further study, to update their knowledge. Teachers need to attend seminars, workshops, and conferences to reacquaint themselves with the importance of good classroom management techniques and to keep up with modern classroom management techniques in teacher education institutions (Orakwue & Ajaegbo, 2020).

Seufert & Latoschik (2022) examined whether pre-service teachers who learned classroom management (CM) in a virtual reality-supported environment improved their classroom management skills more than students who used traditional methods. The researchers evaluated the presence, social presence, credibility, and utility of VR applications and VR-assisted and video-assisted courses, and the results showed that there was a highly significant increase in CM ability. Suryadi, Kemal & Suryana (2022) aimed to analyze the influence of transformational leadership and classroom management of Islamic Religious Education (PAI) teachers on the service quality of primary school teachers. The results show that transformational leadership style had a direct impact on the service quality of PAI teachers. And it can be concluded that improving the service quality of PAI teachers in primary schools in Kendali City can be achieved by increasing the transformational leadership of principals and increasing the classroom management innovation of PAI teachers.

From the literature review, it is obvious that most of the researchers concentrated on how teacher's classroom management influence on student performance. Sorbeto, Corpuz & Alcantara (2022) aimed to determine the impact of teacher effectiveness and classroom

management on academic and non-academic learning outcomes of public secondary school students. The results showed that the main factors affecting teachers' teaching efficiency are the preparation of daily classroom logs and classroom management was an important factor in promoting students' academic and non-academic performance. An investigation conducted by Nevin (2017) spent 150 class hours observing primary school students in Eskisehir city center on investigating teachers' classroom management and student achievement in primary schools. He used the participation criteria to observe teacher behaviors toward the students. The study also found significant variation in the number of correct answers given by the same students studying with different teachers on the comprehensive achievement test. Based on a study conducted by George in 2017 in secondary schools in Uyo Local Government Area among 200 students to examine effective classroom management and students' academic performance. The results have shown that there were significant differences in academic performance in terms of guidance, corporal punishment, teaching supervision, and authorized learning. It was suggested that teachers should be good at managing the classroom to positively affect students' academic performance. (George, 2017). A study had been directed to find out the relationship between classroom management strategies and with academic performance of students among 370 teacher participants. The study found that there was a strong relationship between teachers' classroom management practice and the performance of the students. (Saghir & Abid, 2017).

Teacher Qualification Impacts Student Performance

A teacher's qualification determines the effectiveness of the teacher's mastery of the content, and all of this contributes to the improvement of student achievement (Casian & Claire, 2021). Empirical reviews on the relationship between teacher qualification and student performance have been studied for decades, and are still on studied nowadays as education changes over time.

Researchers like Koirala & Wagle (2020) investigate the influence of teacher qualification on students' scientific achievement in science teaching. The findings showed that teachers with higher qualifications had more skills in teaching than trained teachers and students' science achievement had a strong difference taught by the trained and untrained teachers. Therefore, teacher professional development training and qualification certification had a strong influence on science learning. Studies conducted by Michael, Samaila & Shitnan (2022) explored the influence of teacher qualification on high school physics academic performance. The results showed that the academic performance of high school physics students was significantly correlated with the qualification and experience of teachers. Jaco & Oladipupo (2022) studied the effects of gender, parental socioeconomic status, and teacher qualification on the English language achievement of students in Nigeria. The results showed that parents' socioeconomic status and teacher qualifications have an impact on the English performance of students. The researchers suggested that the government should ensure the children with the necessary materials and qualified teachers.

The same conclusion can also be concluded by Myers (2022), who identified the teacher qualification indicator that was most important in predicting student math achievement. The results showed that middle and high school students assigned to the best teachers scored significantly higher than the overall average. By contrast, students who worked with the least qualified teachers had significantly lower grades. The pairwise comparison showed that there are significant differences in the working efficiency of teachers among different groups. Referring to the study by Machingambi in 2018, the author studied the impacts of teacher qualifications on student performance in science subjects. Results showed that teaching qualifications had a strong influence on students' performance. It was suggested that subject knowledge, pedagogical research, professional development, and years of experience were necessary and positively influence student academic achievement (Machingambi, 2018).

Teacher Quality Influences Student Performance

Competent teachers guarantee the quality of students' learning (Ismail et al., 2017). When talking about the effects teacher quality on students performance, recent research emphasizes that a teacher's contribution to student performance depends on many variables, such as the teacher's educational background, classroom management and years of experience (Ambusaidi, and Yang, 2019).

A study was conducted by Goldhaber and Fumia in 2018 to explore the relationship between the teacher quality gap and student achievement through empirical research. The results showed that the degree of homework among teachers and the distribution of teacher situations can well explain the gap between the quality of teachers to advantaged students and disadvantaged students (Goldhaber and Fumia (2018). Based on the research conducted by Oviawe to investigate the impact of teacher quality and professional development on Technical Colleges students' academic performance. The results showed that there was a significant positive correlation between students' technical drawing performance and teachers' quality. In other words, teachers' quality and professional development were the main factors affecting students' academic performance in technical drawing. (Oviawe, 2020). Ambussaidi & Yang (2019) used ordinary least squares statistical analysis to examine the relationship between teacher quality and eighth-grade students' math performance. The results showed that teacher quality indicators in Oman and Taiwan had a positive impact on eighth-grade students' math scores. And the teacher quality, including teacher qualification, teaching practice, and professional development, had an important impact on student achievement in both countries.

Similar results also came from other researchers. Referring to the study by Sirait in 2016, the researcher examined the relationship between teacher quality and student achievement in Indonesia. He stated two aspects of teacher quality, professional ability, and teaching ability. According to the results, teacher quality significantly affected student performance (Sirait, 2016). Fauth, Decristan & Kunter (2019) investigated the relationship between teacher competence, teaching quality and student outcomes in basic science education. The results showed that teachers' ability (content knowledge, self-efficacy, teaching enthusiasm) was positively correlated with students' learning interest. Self-efficacy was positively correlated with student achievement. Three dimensions of teaching quality (cognitive activation, supportive atmosphere, and classroom management) mediate these relationships.

4. Conclusion

In conclusion, the purpose of the literature review was to provide valuable information and guidelines for researchers, scholars, policymakers, and stakeholders as well as for teachers to study the concept of quality management and the related theories of quality management in education. Today, the quality of education, the definition of high-quality students, and the requirements for the quality of teachers in educational institutions are facing economic, political and social challenges brought about by globalization. The education administrators and stakeholders have realized the importance of effective quality management in teachers and the cultivation of competitive graduates. Therefore, an innovative approach is needed to rethink the current existing quality management system in education area.

Research on teacher quality management has been discussed through two aspects, namely teacher qualification and in-service training, which have significant implications for the understanding of how to improve education quality and high-qualified teachers thus cultivating high-qualified graduates. It could conclude that enhancing teacher quality according to quality management criteria is a practical and effective way to education quality. Thus, provide an exploration of dominant teacher quality management strategies through the gap of theory and practice, and giving school leaders a solid basis in theory and practical application to improve student performance.

Systematic literature review on the influence of teacher quality on student performance proves that teacher quality ensures the requirement of quality education and is one of the most important factors for student performance. The application of quality management theories provide a basic criteria for teachers and students to make improvement. Further studies analyzing the practical implication of quality management and empirical findings where school leaders successfully apply the studied managerial approach are also necessary to concretely investigate.

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