



PARTICIPATION IN CAREER DEVELOPMENT AS DETERMINANT OF SCHOOL OPERATIONAL EFFICIENCY AND INSTRUCTIONAL QUALITY IN ELEMENTARY SCHOOLS

Lelith D. Sison

Master of Arts in Educational Management, Rizal Memorial Colleges, Inc.

Article DOI: <https://doi.org/10.36713/epra24346>

DOI No: 10.36713/epra24346

ABSTRACT

This study aimed to examine the influence of participation in career development on school operational efficiency and instructional quality in elementary schools within Lupon West District, Davao Oriental. Utilizing a non-experimental quantitative research design with a descriptive-correlation approach, the study involved 175 public elementary school teachers selected through simple random sampling. Data were collected using modified and enhanced adapted survey questionnaires, which were pilot-tested to ensure high reliability and internal consistency. Findings reveal that the extent of participation in career development among teachers is generally rated as moderately extensive, with the application of new skills in the classroom being the most evident. In contrast, engagement in professional training and active participation in educational committees were the least evident. School operational efficiency is also rated as moderately extensive, particularly in administrative support responsiveness, while resource allocation effectiveness is the lowest. Instructional quality is generally rated as extensive, especially in clarity of instruction and feedback, while student engagement and participation are rated as moderately extensive. The analysis reveals a significant positive relationship between participation in career development and both school operational efficiency and instructional quality. Regression analysis further confirms that participation in career development significantly influences these two aspects, emphasizing the importance of continuous teacher growth and active engagement in school governance.

KEYWORDS: Career Development; School Operational Efficiency; Instructional Quality; Teacher Professional Growth; Educational Management

INTRODUCTION

Teachers' participation in career development is a key factor in improving operational efficiency and instructional quality in elementary schools. Many schools struggle with organizing their resources effectively and providing high-quality instruction that meets modern educational standards. These challenges are often linked to inadequate professional growth opportunities, limiting teachers' ability to adapt new strategies and enhance overall school functions. By engaging in meaningful career development, educators can expand their skill sets, foster better school operations, and elevate student learning outcomes. Nevertheless, the persistent issue of low operational efficiency and inadequate instructional quality in elementary schools remains a pressing concern.

In the United States, a number of elementary schools have been reported to struggle with low operational efficiency and instructional quality. According to the Molnar (2019), nearly thirty five percent of schools fall below the expected efficiency benchmarks, affecting daily school operations. These operational inefficiencies often lead to gaps in instructional delivery, which in turn affects student learning outcomes. Also, Bellibaş et al. (2021) found that inadequate resource management and insufficient professional development contribute significantly to these challenges. Consequently, these issues create a pressing need to improve management practices to enhance both operational efficiency and instructional quality in elementary schools.

In Africa, elementary schools frequently experience challenges related to low operational efficiency and subpar instructional quality, which adversely impact student learning. Rita (2023) reported that over fifty percent of schools in some rural regions struggle with maintaining consistent operational standards due to limited funding and resources. Adding more, Evans and Mendez Acosta (2021) emphasized that poor school management practices directly result in ineffective teaching methods, thus lowering overall instructional quality. This scenario is compounded by the lack of regular training for teachers and administrative staff, which further undermines operational and educational performance. As a result, addressing these deficiencies is critical for enhancing both school operations and the quality of instruction provided to students.



In Asian countries like Bangladesh and Indonesia, inefficiency in school operations and low instructional quality are significant barriers to educational success. Alam, Haque, and Banu (2021) explore academic supervision in primary schools of Bangladesh, identifying issues such as inadequate oversight and lack of support systems that impede effective teaching and school management. Similarly, Pramana et al. (2021) review strategies to improve education quality in Indonesia, noting that inconsistent implementation of educational policies and insufficient teacher training contribute to operational inefficiencies and subpar instructional quality. These findings indicate a pressing need for robust academic supervision and standardized policy implementation to enhance both the operational efficiency of schools and the quality of instruction provided to students in Asia.

In the Philippines, inefficiency in school operations and low instructional quality are influenced by systemic issues and resource constraints. Generalao et al. (2022) investigate teacher education in the Philippines, finding that the current training programs do not fully meet the demand for quality education, resulting in underprepared teachers and ineffective instructional practices. Moreover, Mirasol et al. (2021) analyze statutory policies on access to quality basic education, revealing that inadequate funding and poor policy implementation hinder the operational efficiency of elementary schools. These studies highlight the urgent need for comprehensive reforms in teacher education and policy execution to address inefficiencies and elevate instructional quality in Philippine elementary schools. By tackling these systemic issues, the Philippines can improve educational outcomes and ensure that elementary schools operate more efficiently and deliver higher quality instruction to students.

In the Lupon West District of Davao Oriental, the issues of low school operational efficiency and instructional quality are particularly pronounced. A significant number of elementary schools in this district struggle with effective resource management and administrative inefficiencies, which have a direct impact on classroom instruction. It was also found that the lack of regular professional development for teachers further exacerbates these problems, resulting in a noticeable decline in the quality of education. These issues are reflected in statistical reports showing that less than 40% of schools meet the standard benchmarks for operational efficiency and instructional effectiveness. Thus, the problematic issue in this district underscores the urgent need for targeted managerial reforms and investments in teacher training to uplift both operational performance and the overall quality of instruction.

Many studies highlight that professional growth can improve how schools manage their daily operations and deliver quality instruction, but they often overlook specific factors that drive effective career development among teachers. There is also a lack of quantitative data linking career development to the measured outcomes of school operational efficiency and instructional quality, especially at the elementary level. This gap makes it hard to identify which aspects of career development matter most for improving the running of schools and enhancing teaching standards. Moreover, existing research rarely focuses on local contexts, leaving a big question mark about how teachers' participation in career development truly affects schools in particular areas. This lack of clarity forms the central research gap that the present study aims to fill.

In Lupon West District, Davao Oriental, school administrators and teachers often face day-to-day operational challenges that affect the quality of instruction, and career development opportunities remain unevenly distributed. Addressing this gap in understanding is important, since improving teachers' skills and motivation could lead to smoother school operations and higher levels of teaching excellence. By examining the relationship between career development and these key aspects of school performance, this study could provide valuable insights for policymakers and educational leaders in the district. Focusing on a quantitative approach allows for the collection of concrete data and factual evidence, which is vital for crafting well-informed solutions. Thus, the urgency to investigate this topic in Lupon West District arises from the need to strengthen school practices and ensure that teachers receive the professional support necessary to serve students effectively.

REVIEW OF SIGNIFICANT LITERATURE

This section covers discussions on variables and their indicators. It includes analyses of concepts, ideas, and perspectives sourced from various authors through a range of books, journals, and electronic platforms.

Participation in Career Development

Participation in career development refers to the active involvement of teachers in professional growth opportunities, such as workshops, training programs, and further education, aimed at enhancing their teaching skills and career progression. Teachers perceive participation in career development as a vital aspect of their professional journey, enabling them to stay updated with educational trends and improve their instructional effectiveness (Krille, 2020). Also, participation in career development refers to teachers' active engagement in continuous professional learning opportunities aimed at enhancing their knowledge, skills, and instructional practices. The study highlights that teachers' motivation to participate in such development programs is influenced by both personal factors, such as intrinsic motivation and self-efficacy, and school-level factors, including administrative support and a positive professional learning culture. Participation in career development, therefore, is a multifaceted process driven by individual aspirations for growth and institutional efforts to foster a supportive environment for ongoing learning (Zhang et al., 2021).



Participation in career development activities plays a critical role in enhancing teachers' professional competencies and overall self-efficacy. Research shows that different types of professional development activities, such as workshops, formal courses, and mentoring, significantly influence teachers' self-perceptions and instructional effectiveness. Gümüş and Bellibaş (2023) found that teachers who engage in diverse professional development activities report higher levels of self-efficacy, which translates into improved instructional practices. Similarly, Rahman (2021) highlighted that while participation rates in professional development are high in Indonesia, the actual impact on teaching practices remains limited, often due to the low quality and lack of relevance in these programs. These findings suggest that mere participation is insufficient; the content and delivery of career development initiatives must be aligned with teachers' needs to foster meaningful improvements in teaching efficacy.

Beyond individual skill enhancement, teacher participation in professional development is also shaped by broader systemic factors, including career progression and institutional support. Njenga (2023) argued that participation in continuing professional development is often driven by both intrinsic motivation and external pressures, such as career advancement opportunities and performance expectations. In this context, Rinke and Mawhinney (2019) examined the reasons why teachers leave the profession and found that inadequate career development opportunities can push teachers out of the field, while targeted, effective professional development can serve as a pull factor that enhances job satisfaction and retention. These studies underscore the importance of creating career development pathways that not only focus on skill acquisition but also support long-term career growth and stability, ensuring that teachers remain engaged and effective in their roles.

Meanwhile, participation in career development plays a crucial role in enhancing school operational efficiency, as perceived by teachers, particularly through continuous professional development (CPD). Berhanu (2024) emphasized that teachers' perceptions of CPD, along with their personal characteristics and the support they receive from school leaders, are critical factors in the successful implementation of professional development initiatives. Teachers who actively engage in CPD are more likely to adapt new strategies that contribute to improved school operations, such as better classroom management and enhanced instructional quality. Chiemeka-Unogu (2019) similarly highlighted the importance of principals' participation in staff development programs, which fosters a collaborative environment and enhances overall school performance. These findings suggest that when both teachers and administrators participate in career development, there is a positive impact on operational efficiency, as it promotes continuous learning and innovation within the school system. Moreover, participation in professional development directly correlates with improved teacher performance, which in turn contributes to school operational efficiency. Pharis et al. (2019) found that teachers who engaged in professional growth programs demonstrated improved teaching effectiveness, which translated into higher student achievement and more streamlined school operations. In the same vein, Malebe et al. (2024) observed that professional development in public primary schools significantly influenced teachers' job performance, contributing to better instructional practices and more effective school management. These studies underscore the notion that career development is not only beneficial for individual teacher growth but also vital for the overall efficiency of school operations, as it enhances both teaching quality and administrative processes.

On a different view, participation in career development programs has a significant influence on instructional quality in schools, as perceived by teachers. Richter et al. (2021) demonstrated that teachers who participate in content-focused professional development programs report improvements in their instructional practices, as these programs equip them with specialized knowledge and effective teaching strategies. This participation helps enhance not only the depth of subject matter understanding but also the overall instructional quality delivered in the classroom. Kim and Lee (2020) further highlighted the role of principal instructional leadership in encouraging teachers to engage in professional development. In countries like Japan, Singapore, and South Korea, principals who actively support and promote professional development create environments that foster higher levels of instructional quality among teachers. These findings suggest that participation in professional development, particularly when supported by school leadership, leads to meaningful improvements in teaching practices.

Additionally, professional development programs contribute to both the perceived and actual quality of instruction in schools. Gore et al. (2019) found that teachers who participated in structured professional development, such as the Quality Teaching Rounds program, demonstrated significant improvements in teaching effectiveness, which was observed in student outcomes. This finding supports the idea that professional development not only enhances teachers' perceptions of their own abilities but also leads to measurable improvements in instructional quality. Wisniewski et al. (2022) noted a gap between teachers' self-perceptions of instructional quality and students' perceptions, highlighting that participation in professional development could bridge this gap by aligning teaching practices with students' needs and expectations. These studies illustrate that professional development is a key driver of instructional quality, benefiting both teachers' self-efficacy and student learning experiences.



STATEMENT OF THE PROBLEM

This study aimed to explore how participation in career development influenced school operational efficiency and instructional quality in elementary schools within the Lupon West District, Davao Oriental. Specifically, this study sought to answer the following questions:

1. What is the extent of participation in career development of teachers in terms of:
 - 1.1 engagement in professional training;
 - 1.2 collaborative learning with peers;
 - 1.3 application of new skills in the classroom;
 - 1.4 self-initiated career planning; and
 - 1.5 active participation in educational committees?
2. What is the extent of school operational efficiency in terms of:
 - 2.1 resource allocation effectiveness;
 - 2.2 administrative support responsiveness; and
 - 2.3 timeliness of task execution?
3. What is the extent of instructional quality in schools in terms of:
 - 3.1 student engagement and participation;
 - 3.2 clarity of instruction and feedback; and
 - 3.3 differentiation and adaptability of teaching methods?
4. Is there a significant relationship between:
 - 4.1 participation in career development of teachers and school operational efficiency?; and
 - 4.2 participation in career development of teachers and instructional quality in schools.
5. Do participation in career development of teachers significantly predict school operational efficiency and instructional quality in schools?

METHODOLOGY

This section provided a comprehensive overview of the research design, including details on the ethical considerations, research respondents, research instruments, and procedural steps. It also outlined the methods for data collection and analysis, ensuring a clear framework for the study.

Research Design

In this study, a quantitative research approach was utilized, specifically employing a descriptive-correlational-comparative technique to collect and analyze pertinent data. As explained by Bacon-Shone (2013), a quantitative approach involved the systematic collection of numerical data to explore patterns, relationships, and causal connections among variables. For this study on participation in career development as a determinant of school operational efficiency and instructional quality, using a quantitative methodology provided an objective way to measure key variables and established meaningful correlations. This method facilitated the identification of statistically significant insights and predictions based on measurable data.

By employing surveys or structured questionnaires, the researcher collected data from a large sample of high school teachers, thereby ensuring that the results could be generalized to various educational settings. Such an approach delivered empirical evidence that could inform policies and practices aimed at enhancing instructional quality and school efficiency. The descriptive research method also played a significant role, as it was effective for systematically portraying a phenomenon through data collection without manipulating any variables (Taherdoost, 2022). Within the context of this study, this approach helped document the current levels of teacher engagement in career development, operational efficiency, and instructional quality. Descriptive research was invaluable for recognizing patterns in the data, offering a clear snapshot of the relationships among these factors. By capturing the natural behaviors and attitudes of teachers, it enabled a nuanced understanding that laid the groundwork for future research or targeted interventions.

Additionally, a correlational research design was employed to examine the relationship between career development participation and outcomes like school efficiency and instructional quality. Hassan (2024) noted that correlational research was ideal for determining whether, and how strongly, variables were related. In this study, the approach was used to assess whether greater involvement in career development activities was linked to higher levels of operational efficiency and better instructional outcomes. Without manipulating any of the variables, correlational analysis highlighted associations between career development and school quality, offering valuable insights that could guide policies to enhance educational effectiveness.

Research Respondents

The respondents for this study consisted of 175 elementary school teachers from Lupon West District, Davao Oriental, determined using the Slovin formula. The total population of teachers in the district was 311. By applying the Slovin formula, the researcher ensured that the sample size was statistically representative of the larger teacher population. This method helped obtain a reliable and generalizable understanding of the views on career development, school operational



efficiency, and instructional quality. Consequently, using this approach laid a solid foundation for the study's overall validity and reliability.

The inclusion criteria for selecting respondents were clearly defined to ensure that the study collected relevant and accurate data. First, only currently employed elementary school teachers from Lupon West District, Davao Oriental, were included in the study. Second, teachers were required to have at least one year of teaching experience to ensure they possessed sufficient insight into career development and school operations. Additionally, teachers who were willing to provide informed consent and actively participated in the survey were selected. These criteria were set to ensure that the respondents had a genuine and informed perspective on the factors influencing school operational efficiency and instructional quality. Simple random sampling was used as a technique where every member of the population had an equal chance of being selected. It was a method that avoided bias by randomly choosing respondents from the complete list of individuals (Gupta & Shabbir, 2008). In practice, the researcher compiled a comprehensive list of all 760 elementary school teachers in Lupon West District. Then, a random number generator was used to select 175 teachers from this list, ensuring fairness in the selection process. This method guaranteed that the sample was representative and that the findings could be confidently applied to the entire teacher population in the district.

Research Instrument

The study made use of adopted survey questionnaires to suit the current investigation. The questionnaire was composed of three parts. The first part focused on participation in career development. This section of the questionnaire was distributed among four indicators: engagement in professional training; collaborative learning with peers; application of new skills in the classroom; self-initiated career planning; and active participation in educational committees. The Cronbach alpha value of the new scale is 0.923 described as excellent and interpreted as highly reliable. The questionnaire utilized a 5-point Likert scale, and the determination was based on the following ranges of means.

Data Analysis

The following statistical tools were utilized by the researcher in processing the gathered data:

Mean

The mean was the average value calculated by summing all the data points and dividing by the number of observations. In this study, the mean represented the average level of participation in career development, operational efficiency scores, or instructional quality ratings among the elementary schools surveyed.

Pearson Product-Moment Correlation

This was a statistical measure that assessed the strength and direction of the linear relationship between two continuous variables. In the context of this study, it was used to determine the degree of association between teachers' participation in career development and the schools' operational efficiency and instructional quality.

Regression Analysis

Regression analysis was a statistical method used to model the relationship between a dependent variable and one or more independent variables. For this study, regression analysis was applied to predict how variations in teachers' participation in career development (independent variable) influenced school operational efficiency and instructional quality (dependent variables).

RESULTS AND DISCUSSIONS

This chapter presents the results generated from the data gathered. It is sequenced based on the objectives of the study as presented in the first chapter. Thus, it presents the extents of participation in career development, school operational efficiency, and instructional quality in elementary schools; the significant relationship among these variables; and influence of participation in career development on the school operational efficiency and instructional quality in elementary schools within the Lupon West District, Davao Oriental.

Participation in Career Development

The participation in career development in this study is measured in terms of engagement in professional training; collaborative learning with peers; application of new skills in the classroom; self-initiated career planning; and active participation in educational committees. The extent of this variable and its domain is presented below.

On Table 1, results reveal that participation in career development in terms of engagement in professional training is generally rated as moderately extensive, with an overall mean score of 3.32. This rating suggests that teachers occasionally engage in professional training activities, which contribute to their professional growth and instructional effectiveness. However, the moderate extent of participation indicates that while teachers recognize the value of professional training, they may not consistently engage in these opportunities (Juškevičienė et al., 2024). As emphasized by Méndez et al. (2019), continuous professional development is essential for teachers to stay updated with educational trends, enhance their



teaching skills, and maintain their instructional competence. Therefore, schools may consider providing more accessible and relevant training programs that encourage consistent participation.

The range of means for the specific statements varies from 3.19 to 3.44, indicating a mix of moderately extensive to extensive engagement in professional training activities. The highest-rated statement is attending workshops enhances my teaching skills, with a mean score of 3.44, suggesting that teachers find workshops particularly beneficial for skill enhancement. Conversely, the lowest-rated statement is enrolling in further education improves my instructional effectiveness, with a mean of 3.19, indicating that teachers may have limited access to advanced educational opportunities. This aligns with the observations of Juškevičienė et al. (2024), who emphasized that while teachers often benefit from short-term workshops, sustained growth requires access to advanced courses and continuous learning pathways. These results imply that while teachers appreciate skill-based training, they may benefit from expanded access to higher education programs that deepen their expertise.

CONCLUSIONS AND RECOMMENDATIONS

This part of the paper presents the conclusion and recommendation of the researcher. The discussion is supported by the literature presented in the first chapters and the conclusion is in accordance with statements of the problem presented in this study.

The primary objective of this study was to evaluate the influence of participation in career development on the school operational efficiency and instructional quality in elementary schools utilizing non-experimental quantitative design using descriptive-correlation technique. The researcher selected the 175 public elementary school teachers within the Lupon West District, Davao Oriental as the respondents through simple random sampling method. The researcher made use of modified and enhanced adapted survey questionnaires which was pilot tested in a nearby school to ensure high reliability and internal consistency of the items in the instrument. The result of the study are summarize as follows:

The extent of teacher collaboration in Lupon West District, Davao Oriental, is generally rated as moderately extensive. Among the indicators, engaging in decision-making processes during meetings is the most evident, while listening attentively to colleagues' perspectives is the least evident. These results suggest that while collaborative practices are in place, schools may benefit from initiatives that enhance active listening and inclusivity in team interactions.

The extent of participation in professional development as part of school improvement initiatives is also rated as moderately extensive. Among the indicators, application of new skills in the classroom and seeking additional training are the most evident, while attending workshops and encouraging colleagues are the least evident. These findings suggest that teachers are more likely to implement new strategies than they are to initiate or promote development activities, indicating a need for stronger motivation and support in professional learning participation.

The findings reveal a significant positive relationship between teacher persistence and teacher collaboration in Lupon West District, Davao Oriental. Among the components, commitment to professional growth shows the strongest correlation, while resilience in adversity shows the weakest. These results imply that teachers who are actively invested in their professional growth are more likely to engage collaboratively with their peers, reinforcing the importance of continuous development in fostering collegiality.

Similarly, there is a significant positive relationship between teacher persistence and school improvement initiatives. Commitment to professional growth again exhibits the strongest correlation, followed by dedication to student success, while consistent effort shows the weakest association. These findings suggest that teachers who are professionally driven and student-focused are more engaged in school enhancement efforts, emphasizing the need to support long-term teacher growth.

Regression analysis confirms that teacher persistence significantly influences both teacher collaboration and school improvement initiatives. Teacher persistence accounts for the variances of teacher collaboration and improvement initiatives. These findings confirm that persistent teachers are more likely to lead and engage in collaborative and reform-oriented practices. Overall, the findings emphasize that teacher persistence is a key driver of both collaboration and school improvement.

Conclusions

Based on the findings of this study several conclusions were generated: The findings conclude that teachers in Lupon West District, Davao Oriental, moderately participate in career development activities, with the highest emphasis on applying new skills in the classroom. This suggests that while teachers actively implement learned skills, there is a need to further enhance their engagement in professional training and participation in educational committees. Schools are encouraged to provide more targeted training programs and leadership opportunities to strengthen teachers' career growth.

The findings also reveal that school operational efficiency in Lupon West District, Davao Oriental, is generally rated as moderately extensive, with administrative support responsiveness being the most evident. This implies that while schools



maintain strong support systems for teachers, there is a need to further optimize resource allocation and ensure timely task execution. Schools should enhance budget management practices and strengthen support for efficient task management.

Similarly, instructional quality in elementary schools within Lupon West District, Davao Oriental, is rated as extensive, particularly in terms of clarity of instruction and feedback. This indicates that teachers consistently provide clear explanations and adapt their methods to meet diverse learning needs. However, further strategies may be needed to enhance student engagement and participation, ensuring that learners remain actively involved in lessons.

The findings further show a significant positive relationship between participation in career development and school operational efficiency, with self-initiated career planning and active participation in educational committees demonstrating the strongest associations. This suggests that teachers who proactively plan their careers and engage in school governance significantly enhance school management practices. Schools are encouraged to foster a culture of leadership and career planning among teachers to strengthen school efficiency.

The study also concludes that participation in career development significantly correlated with instructional quality, with self-initiated career planning and active participation in educational committees showing the strongest relationships. This implies that teachers who actively plan their professional growth and engage in leadership roles demonstrate higher instructional quality. Schools should support teachers in career planning and encourage collaborative leadership roles to maintain high-quality teaching practices.

Finally, the results confirm that participation in career development significantly influences both school operational efficiency and instructional quality, aligning with the Organizational Learning Theory by Argyris and Schön (1978), which emphasizes that continuous learning and proactive skill development enhance organizational performance. These findings also support the Self-Determination Theory by Deci and Ryan (1985), as teachers who pursue self-initiated career growth and engage in collaborative leadership demonstrate higher motivation, autonomy, and competence in their roles.

Recommendations

Teachers in Lupon West District, Davao Oriental, are encouraged to strengthen their participation in career development, particularly in engaging in professional training, which has the lowest mean among the indicators. Schools should provide more accessible and relevant training opportunities, including workshops, seminars, and online courses, that directly address teachers' instructional needs. This will enhance teachers' competencies and motivation for continuous professional growth.

School administrators are advised to enhance school operational efficiency by focusing on improving resource allocation effectiveness, which showed the lowest mean among the indicators. Establishing clear guidelines for resource distribution, conducting regular resource audits, and ensuring that all classrooms receive adequate materials can optimize the use of available resources. This approach will minimize resource wastage and ensure equitable access to essential teaching tools. To further improve instructional quality in elementary schools, teachers should be encouraged to enhance student engagement and participation, which demonstrated the lowest mean among the indicators. Schools can promote interactive learning strategies, such as group activities, hands-on projects, and student-led discussions, to increase active participation. Providing teachers with training on designing engaging lessons can also foster a more dynamic learning environment.

It is recommended that teachers enhance their collaborative learning with peers, which showed a moderate correlation with school operational efficiency. Schools can establish peer coaching programs, regular professional learning communities, and collaborative planning sessions to strengthen collegial support and resource sharing. These initiatives can help teachers exchange best practices and collectively enhance school performance.

For improved instructional quality, teachers should focus on self-initiated career planning, which demonstrated the strongest relationship with instructional quality. Schools can encourage teachers to set professional goals, seek mentorship, and participate in career planning workshops to strengthen their commitment to continuous improvement. This approach will empower teachers to take ownership of their professional development and enhance their instructional effectiveness. School administrators are encouraged to sustain strong support for teachers' career development, ensuring that training programs directly connect to school operational goals and instructional quality. Regularly assessing teachers' training needs, providing targeted support, and recognizing active participation in career development can enhance teachers' motivation. This will ultimately lead to improved school operations and higher instructional quality, contributing to better student outcomes.

REFERENCES

1. Abreh, M. K. (2019). Heads of departments' perception of teachers' participation in continuous professional development programmes and its influence on science and mathematics teaching in Ghanaian secondary schools. *African Journal of Educational Studies in Mathematics and Sciences*, 14, 85-99.



2. Alam, M. J., Haque, A. K. M., & Banu, A. (2021). Academic supervision for improving quality education in primary schools of Bangladesh: Concept, issues and implications. *Asian Journal of Education and Social Studies*, 14(4), 1-12.
3. Amponsah, S., Ampadu, E., & Thomas, M. (2023). Professional development among in-service teachers: motivational factors, pathways and coping strategies. *Educational Review*, 75(4), 703-718.
4. Asongfac, B. (2021). *Investigating Teachers' Perceptions of Self-Initiated Professional Development* (Master's thesis, University of Pretoria (South Africa)).
5. Avidov-Ungar, O., & Herscu, O. (2020). Formal professional development as perceived by teachers in different professional life periods. *Professional Development in Education*, 46(5), 833-844.
6. Ayeni, A. J. (2019). Principals' decision making strategies and teachers' productivity in secondary schools in Ondo Central Senatorial District of Ondo state, Nigeria. *Global Journal of Management and Business Research: A Administration and Management*, 18(10), 18-30.
7. Bacon-Shone, J. H. (2013). *Introduction to quantitative research methods*. Graduate School, The University of Hong Kong.
8. Badri, M., Alnuaimi, A., Mohaidat, J., Yang, G., & Al Rashedi, A. (2019). Perception of teachers' professional development needs, impacts, and barriers: The Abu Dhabi case. *Sage Open*, 6(3), 2158244016662901
9. Bellibaş, M. Ş., Gümüş, S., & Liu, Y. (2021). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. *School effectiveness and school improvement*, 32(3), 387-412.
10. Berhanu, K. Z. (2024). *The Implementation of Teachers' Continuous Professional Development (CPD): The Role of Teachers' Personal Characteristics, Perception towards CPD, and Support of School Leaders*. *Research in Educational Administration and Leadership*, 9(3), 282-320.
11. Bernard, R. M., Borokhovski, E., Schmid, R. F., Waddington, D. I., & Pickup, D. I. (2019). Twenty-first century adaptive teaching and individualized learning operationalized as specific blends of student-centered instructional events: A systematic review and meta-analysis. *Campbell Systematic Reviews*, 15(1-2).
12. Blömeke, S., Jentsch, A., Ross, N., Kaiser, G., & König, J. (2022). Opening up the black box: Teacher competence, instructional quality, and students' learning progress. *Learning and Instruction*, 79, 101600.
13. Booth, J., Coldwell, M., Müller, L. M., Perry, E., & Zuccollo, J. (2021). Mid-career teachers: A mixed methods scoping study of professional development, career progression and retention. *Education Sciences*, 11(6), 299.
14. Chandra Handa, M. (2020). Examining students' and teachers' perceptions of differentiated practices, student engagement, and teacher qualities. *Journal of Advanced Academics*, 31(4), 530-568.
15. Cheng, F. F., Wu, C. S., & Su, P. C. (2021). The impact of collaborative learning and personality on satisfaction in innovative teaching context. *Frontiers in Psychology*, 12, 713497.
16. Chiemeka-Unogu, C. M. (2019). Principals' participation in staff development programmes for effective performance in public secondary schools in Rivers state. *International Journal of Scientific Research in Education*, 11(2), 204-219.
17. Coubergs, C., Struyven, K., Vanthournout, G., & Engels, N. (2019). Measuring teachers' perceptions about differentiated instruction: The DI-Quest instrument and model. *Studies in Educational Evaluation*, 53, 41-54.
18. Dhungana, S. (2022). *SELF-INITIATED DIMENSION OF ENGLISH LANGUAGE TEACHERS' PROFESSIONAL DEVELOPMENT: A NARRATIVE INQUIRY* (Doctoral dissertation, Kathmandu University School of Education).
19. Drosos, D., Kyriakopoulos, G. L., Ntanos, S., & Parissi, A. (2021). School Managers Perceptions towards Energy Efficiency and Renewable Energy Sources. *International Journal of Renewable Energy Development*, 10(3).
20. Dulo, A. A. (2022). In-service teachers' professional development and instructional quality in secondary schools in Gedeo Zone, Ethiopia. *Social Sciences & Humanities Open*, 5(1), 100252.
21. Egbe, A. (2022). *The contribution of Education Management Information System on administrative effectiveness of secondary schools in Yaoundé municipality* (Doctoral dissertation, UNIVERSITY OF YAOUNDE I)
22. Evans, D. K., & Mendez Acosta, A. (2021). Education in Africa: What are we learning?. *Journal of African Economies*, 30(1), 13-54.
23. Fauth, B., Wagner, W., Bertram, C., Göllner, R., Roloff, J., Lüdtke, O., ... & Trautwein, U. (2020). Don't blame the teacher? The need to account for classroom characteristics in evaluations of teaching quality. *Journal of Educational Psychology*, 112(6), 1284.
24. Fiorilli, C., Buonomo, I., Romano, L., Passiatore, Y., Iezzi, D. F., Santoro, P. E., ... & Pepe, A. (2020). Teacher confidence in professional training: The predictive roles of engagement and burnout. *Sustainability*, 12(16), 6345.
25. Fryer, L. K., & Leenknecht, M. J. (2023). Toward an organising theoretical model for teacher clarity, feedback and self-efficacy in the classroom. *Educational Psychology Review*, 35(3), 68.
26. Generalao, I. N., Ducanes, G., Yee, K. M., & David, C. C. (2022). Teacher education in the Philippines: Are we meeting the demand for quality. Retrieved May, 20, 2022.
27. Gheysens, E., Coubergs, C., Griful-Freixenet, J., Engels, N., & Struyven, K. (2022). Differentiated instruction: the diversity of teachers' philosophy and praxis to adapt teaching to students' interests, readiness and learning profiles. *International Journal of Inclusive Education*, 26(14), 1383-1400.
28. Glover, D., & Levačić, R. (2020). *Educational resource management: An international perspective*. UCL Press.
29. Goodyear, V. A. (2019). Sustained professional development on cooperative learning: Impact on six teachers' practices and students' learning. *Research quarterly for exercise and sport*, 88(1), 83-94.
30. Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2019). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and teacher education*, 68, 99-113.
31. Gülsen, F. U., & Çelik, Ö. (2021). Secondary School Teachers' Effective School Perception: The Role of School Culture and Teacher Empowerment. *International Journal of Progressive Education*, 17(5), 332-344.



32. Gümüş, E., & Bellibaş, M. Ş. (2023). *The relationship between the types of professional development activities teachers participate in and their self-efficacy: A multi-country analysis*. *European Journal of Teacher Education*, 46(1), 67-94.
33. Gupta, S., & Shabbir, J. (2008). *On improvement in estimating the population mean in simple random sampling*. *Journal of Applied Statistics*, 35(5), 559-566.
34. Hamamcioglu, T. (2023). *Tertiary Level Turkish EFL Teachers' Perceptions and Experiences About Self-Initiated Professional Development* (Doctoral dissertation, Bilkent University).
35. Harrison, M. G., King, R. B., & Wang, H. (2023). *Satisfied teachers are good teachers: The association between teacher job satisfaction and instructional quality*. *British Educational Research Journal*, 49(3), 476-498
36. Hashim, A. K., Torres, C., & Kumar, J. M. (2023). *Is more autonomy better? How school actors perceive school autonomy and effectiveness in context*. *Journal of Educational Change*, 24(2), 183-212.
37. Hassan, E., Groot, W., & Volante, L. (2022). *Education funding and learning outcomes in Sub-Saharan Africa: A review of reviews*. *International Journal of Educational Research Open*, 3, 100181.
38. Havik, T., & Westergård, E. (2020). *Do teachers matter? Students' perceptions of classroom interactions and student engagement*. *Scandinavian journal of educational research*, 64(4), 488-507.
39. Herbert, B., Fischer, J., & Klieme, E. (2022). *How valid are student perceptions of teaching quality across education systems?*. *Learning and Instruction*, 82, 101652.
40. Holzberger, D., & Schiepe-Tiska, A. (2021). *Is the school context associated with instructional quality? The effects of social composition, leadership, teacher collaboration, and school climate*. *School Effectiveness and School Improvement*, 32(3), 465-485.
41. Ji, Y. (2021). *Does Teacher Engagement Matter? Exploring Relationship Between Teachers' Engagement in Professional Development and Teaching Practice*. *International Journal of TESOL Studies*, 3(4).
42. Johansson, S., & Myrberg, E. (2019). *Teacher specialization and student perceived instructional quality: what are the relationships to student reading achievement?*. *Educational Assessment, Evaluation and Accountability*, 31(2), 177-200
43. Juškevičienė, A., Jeuskova, T., Stupurienė, G., & Vinikienė, L. (2024). *STEM Teachers' Motivation and Engagement in Teacher Professional Development and Career Advancement: A Case Study of Lithuania*. *Education Sciences*, 14(7), 780.
44. Kanake, L. K. (2023). *Influence of Teachers' Performance and Appraisal Development (Tpad) on Job Performance in Public Secondary Schools in Kikuyu-sub County, Kenya* (Doctoral dissertation, University of Nairobi).
45. Ke, Z., Yin, H., & Huang, S. (2019). *Teacher participation in school-based professional development in China: does it matter for teacher efficacy and teaching strategies?*. *Teachers and Teaching*, 25(7), 821-836.
46. Kellermann, C., Nachbauer, M., Gaertner, H., & Thiel, F. (2023). *The effect of school leaders' feedback on teaching quality perceived by students—results of an intervention study*. *School Effectiveness and School Improvement*, 34(1), 24-42.
47. Kim, T., & Lee, Y. (2020). *Principal instructional leadership for teacher participation in professional development: evidence from Japan, Singapore, and South Korea*. *Asia Pacific Education Review*, 21(2), 261-278.
48. Klusmann, U., Aldrup, K., Roloff, J., Lüdtke, O., & Hamre, B. K. (2022). *Does instructional quality mediate the link between teachers' emotional exhaustion and student outcomes? A large-scale study using teacher and student reports*. *Journal of Educational Psychology*, 114(6), 1442.
49. Komalasari, K., Arafat, Y., & Mulyadi, M. (2020). *Principal's management competencies in improving the quality of education*. *Journal of social work and Science Education*, 1(2), 181-193.
50. Kougiyas, K., & Efstathopoulos, J. (2020). *The operational framework of the Greek educational system as an obstacle to the implementation of sustainable school*. In *Frontiers in Education* (Vol. 5, p. 142). Frontiers Media SA.
51. Krille, C. (2020). *Teachers' participation in professional development: A systematic review*.
52. Kundu, A., Bej, T., & Dey, K. N. (2020). *An empirical study on the correlation between teacher efficacy and ICT infrastructure*. *The International Journal of Information and Learning Technology*, 37(4), 213-238.
53. Law, Q., Chung, J., Leung, L., & Wong, T. (2019). *Perceptions of collaborative learning in enhancing undergraduate education students' engagement in teaching and learning English*. *US-China Education Review*, 7(2), 89-100
54. Le, H., Janssen, J., & Wubbels, T. (2019). *Collaborative learning practices: teacher and student perceived obstacles to effective student collaboration*. *Cambridge Journal of Education*, 48(1), 103-122.
55. Leino, K., Nissinen, K., & Sirén, M. (2022). *Associations between teacher quality, instructional quality and student reading outcomes in Nordic PIRLS 2016 data. Large-Scale Assessments in Education*, 10(1), 25.
56. Limberg, D., Starrett, A., Ohrt, J. H., Irvin, M. J., Lotter, C., & Roy, G. J. (2021). *School counselor and teacher collaboration to enhance students' career development using project-based learning*. *Professional School Counseling*, 24(1_part_3), 2156759X211011908.
57. Lindner, K. T., Alnahdi, G. H., Wahl, S., & Schwab, S. (2019). *Perceived differentiation and personalization teaching approaches in inclusive classrooms: Perspectives of students and teachers*. In *Frontiers in Education* (Vol. 4, p. 58). Frontiers Media SA.
58. Liu, Y., & Liao, W. (2019). *Professional development and teacher efficacy: Evidence from the 2013 TALIS*. *School Effectiveness and School Improvement*, 30(4), 487-509.
59. Liu, Y., Bellibaş, M. Ş., & Gümüş, S. (2021). *The effect of instructional leadership and distributed leadership on teacher self-efficacy and job satisfaction: Mediating roles of supportive school culture and teacher collaboration*. *Educational Management Administration & Leadership*, 49(3), 430-453.
60. Malebe, C. K., Ochieng, P., & Nyabisi, E. (2024). *Influence Of Professional Development On Teachers' Job Or Work Performance In Public Primary Schools In Nakuru County Kenya*. *Global Journal of Social Sciences*, 23(2), 269-291.



61. Meeuwissen, S. N., Spruijt, A., van Veen, J. W., & de Goiej, A. F. (2019). Student participation in governance of medical and veterinary education: experiences and perspectives of student representatives and program directors. *Advances in Health Sciences Education*, 24(4), 665-690.
62. Méndez, D. M., Arellano, A. B., Khiu, E., Keh, J. S., & Bull, R. (2019). Preschool teachers' engagement in professional development: Frequency, perceived usefulness, and relationship with self-efficacy beliefs. *Psychology, Society & Education*, 9(2), 181-199.
63. Mirasol, J. M., Necosia, J. V. B., Bicar, B. B., & Garcia, H. P. (2021). Statutory policy analysis on access to Philippine quality basic education. *International Journal of Educational Research Open*, 2, 100093.
64. Mohd, N., Murad, M. A. A., & Omar, M. K. (2023). Exploring Items for Measuring Self-initiated Professional Development Construct in The Context of Continuous Professional Development System Usage. *International Journal of Academic Research in Progressive Education and Development*, 12(4).
65. Molnar, A. (2019). Virtual Schools in the US 2019. National Education Policy Center. <https://eric.ed.gov/?id=ED595244>
67. Mu, J., Bayrak, A., & Ufer, S. (2022). Conceptualizing and measuring instructional quality in mathematics education: A systematic literature review. In *Frontiers in Education* (Vol. 7, p. 994739). Frontiers Media SA.
68. Naidoo, P. (2019). Perceptions of teachers and school management teams of the leadership roles of public school principals. *South African Journal of Education*, 39(2).
69. Nguyen, V. P., Thi, T. T., & Van, T. T. (2022). Exploring factors affecting high school teachers' participation in professional development. *JETT*, 13(5), 221-233.
70. Njenga, M. (2023). Teacher participation in continuing professional development: A theoretical framework. *Journal of Adult and Continuing Education*, 29(1), 69-85.
71. Okonya, A. G. A. (2022). Analyzing perceived effectiveness of strategic plan implementation on internal efficiency of public secondary schools in Mombasa County, Kenya (Doctoral dissertation, Pwani University).
72. Oliech, P. O. (2023). Influence of Principals' Application of Management Support Practices in Enhancement of Teachers Job Performance in Public Secondary Schools in Nyakach Sub-county-Kisumu County, Kenya (Doctoral dissertation, University of Nairobi).
73. Parsons, S. A., Hutchison, A. C., Hall, L. A., Parsons, A. W., Ives, S. T., & Leggett, A. B. (2019). US teachers' perceptions of online professional development. *Teaching and Teacher Education*, 82(1), 33-42.
74. Parsons, S. A., Vaughn, M., Scales, R. Q., Gallagher, M. A., Parsons, A. W., Davis, S. G., ... & Allen, M. (2019). Teachers' instructional adaptations: A research synthesis. *Review of educational research*, 88(2), 205-242
75. Pharis, T. J., Wu, E., Sullivan, S., & Moore, L. (2019). Improving Teacher Quality: Professional development implications from teacher professional growth and effectiveness system implementation in Rural Kentucky High Schools. *Educational research quarterly*, 42(3), 29-48.
76. Philip, R. M. (2020). Assessing the impact of the implementation of teacher performance appraisal development tool on the quality of teaching in Kenya. A case study of Narok County secondary schools. *The Cradle of Knowledge: African Journal of Educational and Social Science Research*, 7(1), 16-28.
77. Picard, K., & Kutsyuruba, B. (2019). Teachers' engagement in professional development: A collective case study. *Educational Policies and Current Practices*, 2(2), 89-100.
78. Pramana, C., Chamidah, D., Suyatno, S., Renadi, F., & Syaharuddin, S. (2021). Strategies to Improved Education Quality in Indonesia: A Review. *Turkish Online Journal of Qualitative Inquiry*, 12(3).
79. Rahman, A. (2021). High Participation, Low Impact: The Challenge for Teacher Professional Development in Indonesia. *International Journal of Pedagogy and Teacher Education*, 5(1), 1-10.
80. Richter, E., Kunter, M., Marx, A., & Richter, D. (2021). Who participates in content-focused teacher professional development? Evidence from a large scale study. In *Frontiers in Education* (Vol. 6, p. 722169). Frontiers Media SA.
81. Rinke, C. R., & Mawhinney, L. (2019). Insights from teacher leavers: Push and pull in career development. *Teaching Education*, 28(4), 360-376.
82. Rita, H. (2023). Teacher efficiency and program implementation in primary schools Koboko district Uganda (Doctoral dissertation, Kampala International University, College of education, open distance and e-learning.).
83. Rodríguez-Mantilla, J. M., León Carrascosa, V., & Martínez-Zarzuolo, A. (2021). ISO 9001 standard and their impact on school management and planning and support systems-Comparative study on perception between heads-teachers. *The TQM Journal*, 33(6), 1610-1630.
84. Rohma, S., Harapan, E., & Wardiah, D. (2020). The influence of school-based management and teacher's professionalism toward teacher's performance. *Journal of social work and Science Education*, 1(1), 13-23.
85. Ruga, T. W. (2019). Teachers' Perceptions On The Influence Of Quality Assurance And Standards Officers' Supervisory Role On Pupils' Academic Improvement In Public Primary Schools In Kiambu County, Kenya (Doctoral dissertation).
86. Shiddike, M. O., & Rahman, A. A. (2019). Engaging faculty in professional development: Lessons from Bangladesh.
87. Silva, P. M. D., & ANDAL, E. Z. (2023). School Head's Governance in Managing School Operations and Resources as Correlate of Public Elementary School's Performance.
88. Singh, A. K., Rind, I. A., & Sabur, Z. (2021). Continuous professional development of school teachers: Experiences of Bangladesh, India, and Pakistan. In *Handbook of education systems in South Asia* (pp. 1355-1380). Singapore: Springer Singapore.
89. Skaalvik, E. M., & Skaalvik, S. (2019). Motivated for teaching? Associations with school goal structure, teacher self-efficacy, job satisfaction and emotional exhaustion. *Teaching and Teacher Education*, 67, 152-160.
90. Smale-Jacobse, A. E., Meijer, A., Helms-Lorenz, M., & Maulana, R. (2019). Differentiated instruction in secondary education: A systematic review of research evidence. *Frontiers in psychology*, 10, 2366.



91. Sodangi, U., Isma'il, A., & Abdulrahman, A. (2022). Perception of secondary school science and mathematics teachers on professional development participation in Zamfara State, Nigeria. *Integrity Journal of Education and Training*, 6(2), 37-45.
92. Soto-Pérez, M., Sánchez-García, J. Y., & Núñez-Ríos, J. E. (2020). Factors to improve job performance and school effectiveness. *International Journal of Educational Management*, 34(5), 805-822.
93. Sumarsono, R. B., Triwiyanto, T., Kusumaningrum, D. E., & Gunawan, I. (2019). Opportunities for the implementation of school-based management in the eastern area of Indonesia. *Int. J. Innov. Creat. Chang*, 5(4), 180-196.
94. Susilawati, E., Lubis, H., Kesuma, S., Pratama, I., & Khaira, I. (2023). Factors Affecting Engineering Institutes Operational Efficiency: Exploring Mediating Role Of Digital Technologies Adoption In Teaching/Learning. *Operational Research in Engineering Sciences: Theory and Applications*, 6(1), 252-273.
95. Taherdoost, H. (2022). What are different research approaches? Comprehensive Review of Qualitative, quantitative, and mixed method research, their applications, types, and limitations. *Journal of Management Science & Engineering Research*, 5(1), 53-63.
96. Tannehill, D., Demirhan, G., Čaplová, P., & Avsar, Z. (2021). Continuing professional development for physical education teachers in Europe. *European Physical Education Review*, 27(1), 150-167.
97. Teig, N., & Nilsen, T. (2022). Profiles of instructional quality in primary and secondary education: Patterns, predictors, and relations to student achievement and motivation in science. *Studies in Educational Evaluation*, 74, 101170.