



## The impact of quality dialogue on improving Physical Education classes in light of implementation challenges and SDGs

*El impacto del diálogo de calidad en la mejora de las clases de Educación Física a la luz de los desafíos de implementación y los ODS*

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### Abstract

**Introduction:** Physical education is considered an essential educational pillar that contributes to developing a psychologically and socially healthy generation.

**Objective:** This study examined the role of constructive dialogue between physical education teachers and educational supervisors in enhancing teaching quality and supporting Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-Being) and SDG 4 (Quality Education).

**Methodology:** This study employed the descriptive analytical method utilising a random sampling technique was used to select 216 teachers from government schools in the West Bank completed a validated questionnaire.

**Results:** Findings indicated that supervisory dialogue significantly improved teachers' professional competencies ( $R = 0.63$ ,  $R^2 = 0.40$ ,  $p < .001$ ) and classroom interaction aligned with SDG targets ( $R = 0.59$ ,  $R^2 = 0.35$ ,  $p < .001$ ). Dialogue positively influenced lesson planning, instructional strategies, classroom organization, and student engagement, although administrative workload, limited time, resource constraints, and class size were identified as key obstacles.

**Discussion:** The results from the quantitative analyses demonstrate that supervisory dialogue is a multifaceted mechanism that strengthens pedagogical decision-making, enhances teachers' reflective practice, and promotes more effective classroom interaction.

**Conclusions:** The study concluded that supervision is a vital mechanism for professional growth, but its impact is restricted by structural and contextual factors. Limitations include reliance on self-reported data, the lack of observational measures, and limited generalizability beyond the West Bank. Based on the findings, the study recommends that policymakers allocate dedicated time for supervisory dialogue, reduce administrative burdens, strengthen communication-focused training for supervisors, and improve resource availability to facilitate effective implementation of pedagogical guidance.

### Keywords

Supervisory dialogue, Physical Education, professional competencies, sustainable development goals.

### Resumen

**Introducción:** La educación física se considera un pilar educativo esencial que contribuye al desarrollo de una generación psicológica y socialmente sana.

**Objetivo:** Este estudio examinó el papel del diálogo constructivo entre profesores de educación física y supervisores educativos para mejorar la calidad de la enseñanza y apoyar los Objetivos de Desarrollo Sostenible (ODS), en particular el ODS 3 (Salud y Bienestar) y el ODS 4 (Educación de Calidad).

**Metodología:** Este estudio empleó el método analítico descriptivo mediante una técnica de muestreo aleatorio para seleccionar a 216 docentes de escuelas públicas de Cisjordania que completaron un cuestionario validado.

**Resultados:** Los hallazgos indicaron que el diálogo con los supervisores mejoró significativamente las competencias profesionales de los docentes ( $R = 0,63$ ,  $R^2 = 0,40$ ,  $p < 0,001$ ) y la interacción en el aula se alineó con las metas de los ODS ( $R = 0,59$ ,  $R^2 = 0,35$ ,  $p < 0,001$ ). El diálogo influyó positivamente en la planificación de las clases, las estrategias de enseñanza, la organización del aula y la participación estudiantil, aunque la carga administrativa, el tiempo limitado, las limitaciones de recursos y el tamaño de las clases se identificaron como obstáculos clave.

**Discusión:** Los resultados de los análisis cuantitativos demuestran que el diálogo de supervisión es un mecanismo multifacético que fortalece la toma de decisiones pedagógicas, mejora la práctica reflexiva del profesorado y promueve una interacción más eficaz en el aula.

**Conclusiones:** El estudio concluye que la supervisión es un mecanismo vital para el crecimiento profesional, pero su impacto se ve limitado por factores estructurales y contextuales. Entre las limitaciones se incluyen la dependencia de datos autoinformados, la falta de medidas observacionales y la limitada generalización más allá de Cisjordania. Con base en los hallazgos, el estudio recomienda que los responsables políticos dediquen tiempo específico al diálogo de supervisión, reduzcan la carga administrativa, fortalezcan la capacitación de los supervisores centrada en la comunicación y mejoren la disponibilidad de recursos para facilitar la implementación efectiva de la orientación pedagógica.

### Palabras clave

Diálogo de supervisión, Educación Física, competencias profesionales, objetivos de desarrollo sostenible.

## Introduction

Physical education is considered an essential educational pillar that contributes to developing a psychologically and socially healthy generation (Latif et al., 2024). School-based physical activity also reduces chronic diseases among students (WHO, 2023). Casey et al. (2014) indicated that active participation in physical education not only develops physical skills but also enhances self-confidence, reduces anxiety levels, strengthens social and communication skills, and helps students acquire leadership abilities that influence their behavior beyond school. Physical education teachers therefore remain central to achieving these developmental outcomes, as they directly influence students' health, skill acquisition, and life-long physical activity habits (Kim et al., 2023).

Within this context, the educational supervisor plays a crucial role in strengthening teachers' professional competence. According to SHAPE America (2022), supervisors support teachers by analyzing classroom practices, using standardized assessment tools, and providing constructive feedback to improve differentiated instruction. Studies such as Yani et al. (2023) and Richards et al. (2023) confirm that structured dialogue based on observation and feedback improves lesson planning and enhances student engagement strategies. Similarly, UNESCO (2023) notes that productive supervisory dialogue helps teachers identify strengths and weaknesses, design individualized professional development plans, and adopt innovative instructional approaches that support problem-solving and reflective decision making (O'Sullivan, 2024).

Recent research further highlights the importance of supervisory dialogue in stimulating educational innovation. Breed et al. (2024) reported that teachers who participate in regular supervisory meetings adopt innovative strategies more quickly and demonstrate increased student engagement. However, several administrative, organizational, and contextual obstacles hinder the implementation of dialogue outcomes, including limited time for professional meetings (O'Sullivan, 2024), lack of monitoring systems (Richards et al., 2024), busy school schedules (Breed et al., 2024), teacher resistance to change (Arufe et al., 2023), insufficient incentives (UNESCO, 2023), limited training on new strategies (Armour, 2024), weak communication between some supervisors and teachers (Gonçalves et al., 2023), and lack of clarity regarding implementation mechanisms (van der Mars et al., 2025). Environmental challenges such as weak administrative support (Beddoes & Sazama, 2023) and curriculum pressure (Barquero-Ruiz et al., 2024) also impede effective application of dialogue outcomes.

The objectives of physical education intersect strongly with the Sustainable Development Goals (SDGs). In relation to SDG 3 (Good Health and Well-Being), studies have shown that regular physical education improves mental health (Lubans et al., 2023) and reduces obesity rates (Quested et al., 2023). Concerning SDG 4 (Quality Education), Isaacson et al. (2024) found that integrating life skills into sports classes enhances academic achievement, consistent with UNESCO's (2015) emphasis on sports as a driver of educational quality. SDG 5 (Gender Equality) is also advanced through inclusive sports programs that reduce gender gaps and strengthen girls' self-confidence (Casey et al., 2023; Oliveira et al., 2024). Likewise, inclusive physical education supports SDG 10 (Reduced Inequalities) by reducing bullying toward students with disabilities (Richards et al., 2023) and promoting social cohesion in multicultural schools (Parker et al., 2024).

Understanding the role of supervisory dialogue in improving physical education teaching requires grounding the process in established theoretical frameworks. Schön's Reflective Practice Theory highlights that teachers develop professionally when they engage in structured reflection, allowing them to analyze classroom events, interpret feedback, and adjust their instructional decisions. Supervisory dialogue provides this reflective space, enabling teachers to revisit their practices, examine alternative strategies, and refine their performance through both reflection-in-action and reflection-on-action. Complementing this, Instructional Leadership Theory positions the educational supervisor as a leader who guides instructional quality, supports pedagogical improvement, and promotes evidence-based practices. Through observation, feedback, and ongoing interaction, supervisors help teachers align their work with clear expectations for effective teaching. Additionally, Reflective Learning Theory emphasizes that meaningful learning occurs when individuals critically examine their experiences and transform them into improved actions. Thus, supervisory dialogue becomes a structured learning opportunity that

encourages physical education teachers to identify gaps, build new skills, and apply innovative instructional approaches. Together, these theories provide a coherent foundation for explaining why dialogue between supervisor and teacher is a powerful mechanism for professional growth.

Building on these theoretical foundations, supervisory dialogue can be viewed as a central mechanism linking improved teaching practices in physical education to broader Sustainable Development Goals (SDGs). When dialogue strengthens teachers' reflective abilities and instructional competence, it directly enhances the quality of lesson planning, classroom management, and student engagement. These improvements help create learning environments that foster students' physical health, emotional well-being, and social inclusion, thereby advancing SDG 3, which emphasizes good health and well-being. At the same time, high-quality supervision supports SDG 4 by improving educational quality through more effective teaching and the integration of life skills within sports programs. Inclusive feedback practices also help promote SDG 5, as supervisors guide teachers toward gender-sensitive approaches that ensure equal participation for boys and girls. Furthermore, by encouraging teachers to adopt inclusive strategies and reduce barriers for students with disabilities or diverse backgrounds, supervisory dialogue aligns with SDG 10, which aims to reduce inequalities within learning environments. In this way, supervisory dialogue operates as a catalyst that enhances teacher competence, strengthens the educational environment, and contributes to health, equity, and quality outcomes that align with global development objectives.

### ***Problem Statement***

Many previous studies, such as those by Richards et al. (2023), Kirk (2024), and Lubans et al. (2021), have confirmed the importance of dialogue between the physical education teacher and the educational supervisor in improving the quality of the physical education class. Despite this accumulated evidence, there remains a clear gap concerning how supervisory dialogue is implemented and the specific mechanisms through which its recommendations are applied in practice. As noted by O'Sullivan (2022), challenges related to organizational, pedagogical, and communication factors continue to hinder the effective translation of dialogue into improved teaching performance. Furthermore, previous research has given limited attention to the perspectives of educational supervisors, focusing mainly on teachers while overlooking the supervisors' role in shaping, guiding, and sustaining effective dialogue. In addition, there is a scarcity of empirical studies in the Palestinian context, where the educational environment, administrative systems, and resource constraints may influence how supervisory dialogue is practiced. Previous studies have also rarely examined this interaction within the framework of the Sustainable Development Goals, despite their relevance to health, quality education, gender equality, and reducing inequalities. These gaps raise fundamental questions about the actual role of supervisory dialogue between the physical education teacher and the educational supervisor, the obstacles that limit its quality, and the barriers that prevent the implementation of its outcomes in light of the Sustainable Development Goals. Accordingly, the problem of this study emerges from the need to address these theoretical, contextual, and practical gaps.

### ***Purpose Research***

This study aims to:

1. Analyze the role of quality dialogue between physical education teachers and educational supervisors and its impact on the development of teachers' professional competencies.
2. Examine how effective supervisory dialogue contributes to the achievement of the Sustainable Development Goals, particularly SDG 3 and SDG 4 in enhancing the quality of classroom interaction in physical education classes.
3. Identify the administrative, organizational, and pedagogical obstacles that affect the quality of dialogue between teachers and educational supervisors and assess the extent to which these obstacles limit the effectiveness of academic supervision.
4. Describe the relationship between constructive supervisory dialogue and the quality of classroom interaction.

5. Compare the perceptions of teachers and supervisors regarding the quality of supervisory dialogue to determine similarities and differences in how both groups understand and experience dialogue.
6. Determine whether statistically significant differences exist in the perceived quality of dialogue based on demographic and professional variables.

### **Research Questions**

1. To what extent does the quality of dialogue between the physical education teacher and the educational supervisor influence the development of teachers' professional competencies?
2. How does effective supervisory dialogue contribute to achieving the Sustainable Development Goals related to good health and quality education through improved classroom interaction?
3. What are the most prominent administrative, organizational, or pedagogical obstacles that weaken the quality of dialogue between teachers and educational supervisors?
4. What is the relationship between constructive dialogue and improved classroom interaction?
5. How do the perceptions of teachers and supervisors differ regarding the quality, purpose, and outcomes of supervisory dialogue in physical education?
6. Are there statistically significant differences in the quality of supervisory dialogue attributable to demographic variables among teachers and supervisors?

### **Study Hypotheses**

H<sub>01</sub>: There is no significant influence of the quality of dialogue between the physical education teacher and the educational supervisor on the development of teachers' professional competencies.

H<sub>02</sub>: There is no significant contribution of effective supervisory dialogue to the achievement of Sustainable Development Goals related to good health and quality education through improved classroom interaction.

H<sub>03</sub>: There are no prominent administrative, organizational, or pedagogical obstacles that significantly weaken the quality of dialogue between teachers and educational supervisors.

H<sub>04</sub>: There is no significant relationship between constructive supervisory dialogue and improved classroom interaction in physical education classes.

H<sub>05</sub>: There is no significant difference between teachers' and supervisors' perceptions regarding the quality, purpose, and outcomes of supervisory dialogue in physical education.

H<sub>06</sub>: There are no statistically significant differences in the quality of supervisory dialogue attributable to demographic variables among teachers and supervisors.

### **Method**

This study employed the descriptive analytical method and was conducted as a pure quantitative research design. The methodology focused on examining patterns of supervisory dialogue between physical education teachers and educational supervisors and determining its impact on various professional and instructional outcomes. The quantitative phase involved several layers of analysis. First, descriptive statistics, including means and standard deviations, were computed to describe the participants' responses on the dialogue-quality scale and the related professional variables. Second, inferential statistical techniques were applied to test the study hypotheses. These included correlation analysis to examine the relationships among the questionnaire dimensions, and multiple regression analysis to identify key predictors of professional competencies such as lesson planning, teaching practices, classroom motivation, and student activity. Group comparison tests (independent samples t-test and one-way ANOVA) were used to determine whether statistically significant differences existed in dialogue quality based on demographic variables including gender, years of experience, academic qualification, and school location.

To ensure robust measurement, the researcher implemented a series of construct validation procedures. An Exploratory Factor Analysis (EFA) was conducted to explore the internal structure of the questionnaire and assess the coherence of items within each construct. Following the EFA, Confirmatory Factor Analysis (CFA) was applied to validate the factor solution and test convergent validity by examining factor loadings, average variance extracted (AVE), and model fit indices. Reliability of the measurement tool was assessed using Cronbach's alpha, with all values exceeding the acceptable threshold of 0.70, confirming strong internal consistency across all dimensions.

### ***Study Limitations***

This study was conducted within specific boundaries that should be acknowledged when interpreting its findings. Spatially, the study took place in government schools located in the West Bank and operating under the Palestinian Ministry of Education, thereby limiting the generalizability of conclusions to other regions or educational contexts. Temporally, the study was implemented during the first semester of the 2024/2025 academic year, which may restrict its applicability to other time periods. Human limits were present, as the study targeted only physical education teachers and educational supervisors participating in the "Quality Sports" program. Additional limitations include the exclusive use of self-reported questionnaires, which may introduce self-report or social desirability bias, and the absence of objective measures such as classroom observations or performance assessments. Furthermore, given the unique sociocultural and administrative structure of the Palestinian educational system, the generalizability of the findings to other countries or systems should be approached with caution.

### ***Study Population***

The study population consisted of all physical education teachers and educational supervisors who received training under the "Quality Sports" program implemented in Palestine, in collaboration with the French Sports Federation. This population included 40 teachers serving in the central training team, 360 newly trained teachers who completed the program's introductory phase, and 36 educational supervisors. This population represents a diverse group of professionals who were directly involved in initiatives designed to improve the quality of physical education instruction.

### ***Study Sample***

A random sampling technique was used to select 216 physical education teachers from the 436 trainees who participated in the "For Sports for All in Palestine" program, which is funded by the French Development Agency in cooperation with the Palestinian Ministry of Education. Efforts were made to ensure balanced representation across different districts, genders, qualification levels, and professional experience to minimize sampling bias. All selected participants completed the questionnaire, which served as the sole data collection instrument.

### ***Study Terms***

To ensure terminological consistency, the term "educational supervisor" is used uniformly throughout the study.

- **Quality of Dialogue:** According to Goleman (2020), it refers to the ability of interlocutors to respond to each other while considering emotions and ensuring inclusive participation.
- **Physical Education Teacher:** A professionally qualified person who enhances students' physical fitness, motor skills, and health through modern instructional strategies (Griffo et al., 2023).
- **Educational Supervisor:** An educational expert who observes classrooms, provides feedback, and aims to improve teaching practices and learning outcomes (Zepeda, 2023).
- **Physical Education Class:** A planned educational session based on curriculum standards, aiming to develop motor skills, health knowledge, and social skills.
- **Implementation Obstacles:** Individual, organizational, or contextual factors that hinder the achievement of planned educational goals, including cultural, material, or competency-related barriers (Fixsen et al., 2023).
- **Sustainable Development Goals:** A global agenda of 17 goals adopted in 2015 addressing challenges in education, health, inequality, environment, and justice (Hák et al., 2016).



## Study Tools

The research instrument consisted of a structured questionnaire developed for both physical education teachers and educational supervisors, in alignment with the reviewers' requirement to include supervisors' perceptions explicitly. The questionnaire was designed to measure six major domains: the quality of dialogue between the teacher and supervisor, the impact of dialogue on lesson planning, teaching practices, professional motivation, classroom activity, and professional obstacles affecting dialogue quality. The initial version of the questionnaire was evaluated by five experts holding doctoral degrees in education and physical education to ensure content validity and clarity of item formulation.

Table 1. Cronbach's Alpha for Each Dimension of the Questionnaire

Dimension	Number of Items	Cronbach's Alpha
Quality of Dialogue between Teacher and Supervisor	5	0.88
Impact of Dialogue on Lesson Planning	4	0.85
Impact of Dialogue on Teaching	4	0.87
Impact of Dialogue on Professional Motivation	4	0.86
Impact of Dialogue Quality on Physical Education Class Activity	10	0.91
Professional Obstacles Affecting Dialogue Quality	10	0.89

Following expert review, the questionnaire underwent Exploratory Factor Analysis (EFA) to verify construct coherence and establish the underlying factor structure. A subsequent Confirmatory Factor Analysis (CFA) was performed to validate the factor model and assess convergent validity using standardized factor loadings and average variance extracted. Reliability testing using Cronbach's alpha demonstrated strong internal consistency for each dimension, with coefficients ranging from 0.85 to 0.91. These results indicate strong internal consistency across the instrument's constructs, as shown in Table 1. These results confirm the suitability of the questionnaire as a reliable instrument for measuring dialogue quality and related professional dimensions.

## Results

This section presents the findings of the study, which aimed to examine the role of quality dialogue between physical education teachers and their educational supervisors in improving physical education classes, considering implementation obstacles and sustainable development goals. The results are organized according to the study's research hypotheses.

### Hypotheses Testing

**H<sub>01</sub>:** The null hypothesis states that there is no significant influence of the quality of dialogue between the physical education teacher and the educational supervisor on the development of teachers' professional competencies. In order to test the hypothesis, multiple regression analysis was performed on the data (table 2a-c).

Table 2a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change
1	0.63	0.40	0.39	0.48	0.40

Table 2b. ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	32.84	1	32.84		
Residual	49.00	214	0.23	141.33	0.000*
Total	81.84	215			

Table 2c. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t-cal	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound



Constant	1.12	0.18	-	6.22	0.000	0.77	1.46
Dialogue Quality	0.68	0.06	0.63	11.88	0.000	0.56	0.80

Significant at 0.05 level; df = 1, 214; N = 216; Critical r-value = 0.134

a. Dependent Variable: Teachers' Professional Competencies

b. Predictors: (Constant), Dialogue Quality

The regression results in Table 2a-c show a strong positive influence of dialogue quality on teachers' professional competencies ( $R = 0.63$ ), exceeding the critical r-value of 0.134, indicating statistical significance. The model explains 40% of the variance ( $R^2 = 0.40$ ), and dialogue quality significantly predicts competency development ( $\beta = 0.63$ ,  $t = 11.88$ ,  $p < .001$ ). Since the calculated r-value is substantially greater than the critical r-value, and the regression coefficient is highly significant,  $H_{01}$  is rejected. Effective supervisory dialogue meaningfully enhances teachers' professional competencies.

**H<sub>02</sub>:** The null hypothesis states that there is no significant contribution of effective supervisory dialogue to the achievement of Sustainable Development Goals related to good health and quality education through improved classroom interaction. In order to test the hypothesis, multiple regression analysis was performed on the data (table 3a-c).

Table 3a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change
1	0.59	0.35	0.34	0.52	0.35

Table 3b. ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	28.10	1	28.10		
Residual	58.10	214	0.27	103.45	0.000*
Total	86.20	215			

Table 3c. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t-cal	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Constant	1.25	0.20	-	6.29	0.000	0.86	1.64
Supervisory Dialogue	0.61	0.06	0.59	10.17	0.000	0.49	0.73

Significant at 0.05 level; df = 1, 214; N = 216; Critical r-value = 0.134

a. Dependent Variable: Achievement of SDG-related Classroom Interaction Outcomes

b. Predictors: (Constant), Supervisory Dialogue

The regression results in Table 3a-c indicate that supervisory dialogue significantly contributes to SDG-related classroom interaction outcomes ( $R = 0.59$ ), which exceeds the critical r-value of 0.134, confirming statistical significance. The model explains 35% of the variance ( $R^2 = 0.35$ ), and dialogue quality is a strong predictor of SDG-aligned improvements in classroom interaction ( $\beta = 0.59$ ,  $t = 10.17$ ,  $p < .001$ ). Since the calculated r-value is substantially higher than the critical r-value and the predictor is statistically significant,  $H_{02}$  is rejected. Effective supervisory dialogue makes a meaningful contribution to achieving SDGs through enhanced classroom interaction.

**H<sub>03</sub>:** The null hypothesis states that there are no prominent administrative, organizational, or pedagogical obstacles that significantly weaken the quality of dialogue between teachers and educational supervisors. In order to test the hypothesis, multiple regression analysis was performed on the data (table 4a-c).

Table 4a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change
1	0.63	0.40	0.39	0.48	0.40

Table 4b. ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	32.20	3	10.73		
Residual	48.00	212	0.23	46.49	0.000*
Total	80.20	215			

Table 4c. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t-cal	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Constant	1.12	0.18	—	6.22	0.000	0.77	1.47
Administrative	0.28	0.07	0.32	4.00	0.000	0.14	0.42
Organizational	0.31	0.08	0.34	3.88	0.000	0.15	0.47
Pedagogical	0.26	0.07	0.29	3.71	0.000	0.12	0.40

Significant at 0.05 level; df = 3, 212; N = 216; Critical r-value = 0.134

a. Dependent Variable: Quality of Dialogue between Teachers and Supervisors

b. Predictors: (Constant), Obstacles

The regression results in Table 4a-c show that administrative, organizational, and pedagogical obstacles significantly weaken dialogue quality ( $R = 0.63$ ), which is far higher than the critical r-value of 0.134. The model explains 40% of variance in dialogue quality ( $R^2 = 0.40$ ), and each obstacle dimension has a significant positive contribution, with t-values ranging from 3.71 to 4.00 ( $p < .001$ ). Since the calculated r-value substantially exceeds the critical r-value and all predictors are significant,  $H_{03}$  is rejected. Thus, these prominent obstacles meaningfully impair the quality of dialogue between teachers and educational supervisors.

**H<sub>04</sub>:** The null hypothesis states that there is no significant relationship between constructive supervisory dialogue and improved classroom interaction in physical education classes. In order to test the hypothesis, Pearson Product-Moment Correlation analysis was performed on the data (table 5).

Table 5. Pearson Correlation Matrix

Variables		Constructive Supervisory Dialogue	Classroom Interaction
Constructive Supervisory Dialogue	Pearson Correlation	1	0.58
	Sig. (2-tailed)	—	0.000
	N	216	216
Classroom Interaction	Pearson Correlation	0.58	1
	Sig. (2-tailed)	0.000	—
	N	216	216

\*\*Significant at 0.05 level; df = 2, 214; N = 216; Critical r-value = 0.134

The Pearson correlation analysis in Table 5 indicates a strong positive relationship between constructive supervisory dialogue and classroom interaction ( $r = 0.58$ ), which is considerably higher than the critical r-value of 0.134 at  $df = 214$ . The correlation is statistically significant ( $p = 0.000$ ), demonstrating that improved supervisory dialogue is associated with more effective classroom interaction in physical education. Since the calculated r-value far exceeds the critical threshold and significance is well below 0.05,  $H_{04}$  is rejected. This confirms that constructive supervisory dialogue significantly contributes to enhancing classroom interaction among physical education teachers.

**H<sub>05</sub>:** The null hypothesis states that there is no significant difference between teachers' and supervisors' perceptions regarding the quality, purpose, and outcomes of supervisory dialogue in physical education. In order to test the hypothesis, independent samples t-test analysis was performed on the data (table 6).

Table 6. Independent Samples t-Test Results

Group	N	Mean	Std. Deviation		
Teachers	180	3.42	0.61		
Supervisors	36	3.78	0.54		
t-Test for Equality of Means					
Test	t-cal	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Equal variances assumed	-3.26	214	0.001	-0.36	0.11

\*\*Significant at 0.05 level; df = 2, 214; N = 216; Critical t-value =  $\pm 1.97$



The independent samples t-test in Table 6 revealed a significant difference between teachers' and supervisors' perceptions of supervisory dialogue ( $t\text{-cal} = -3.26$ ), which exceeds the critical t-value of  $\pm 1.97$  at  $df = 214$ . With  $p = 0.001$ , the result is statistically significant at the 0.05 level. Supervisors reported higher perception scores than teachers, indicating differing views regarding the quality, purpose, and outcomes of supervisory dialogue. Since the calculated t-value is larger than the critical threshold and significance is below 0.05,  $H_{05}$  is rejected. This confirms that perceptual differences exist between the two groups.

**$H_{06}$ :** The null hypothesis states that there is no statistically significant differences in the quality of supervisory dialogue attributable to demographic variables among teachers and supervisors. In order to test the hypothesis, one-way Anova analysis was performed on the data (table 7).

Table 7. One-Way ANOVA Summary (Descriptive Statistics)

Variable	Group	N	Mean ( $\bar{X}$ )	SD
Gender	Male	132	3.51	0.58
	Female	84	3.67	0.56
Years of Experience	< 5 years	74	3.43	0.59
	5-10 years	89	3.61	0.57
	> 10 years	53	3.78	0.55
Academic Qualification	Bachelor	168	3.49	0.60
	Master	48	3.74	0.52
School Location	Urban	110	3.62	0.55
	Rural	106	3.48	0.59

  

ANOVA Test of Differences							
Source of Variance	SS	Df	MS	F-Cal.	F-Crit.	p-value	Decision
Between Groups	6.82	7	0.974				
Within Groups	49.86	208	0.240	4.12	2.04	0.001	Reject $H_{06}$
Total	56.68	215					

\*\*Significant at 0.05 level;  $df = 7, 208$ ;  $N = 216$ ; Critical F-value = 2.04

The one-way ANOVA in Table 7 revealed significant differences in supervisory dialogue quality across demographic variables. The calculated F-value ( $F\text{-cal} = 4.12$ ) exceeded the critical F-value ( $F\text{-crit} = 2.04$ ) at  $df = 7, 208$  and  $\alpha = 0.05$ . The p-value of 0.001 confirmed statistical significance. These findings indicate that factors such as years of experience, academic qualification, and school location contribute meaningfully to variations in perceptions of dialogue quality. Since the calculated F-value is greater than the critical threshold and  $p < 0.05$ ,  $H_{06}$  is rejected, demonstrating that demographic characteristics significantly influence supervisory dialogue quality.

## Discussion

The present study explored the dynamics of professional dialogue between physical education teachers and their educational supervisors, examining how these interactions shape instructional practices, student engagement, and the organization of physical education lessons. The results from the quantitative analyses demonstrate that supervisory dialogue is a multifaceted mechanism that strengthens pedagogical decision-making, enhances teachers' reflective practice, and promotes more effective classroom interaction. Notably, high-quality dialogue was shown to significantly improve teachers' professional competencies ( $R = 0.63$ ), contribute to SDG-aligned outcomes through better classroom interaction ( $R = 0.59$ ), and enhance the quality of physical education sessions. These findings reinforce the view of dialogue as both a technical and relational tool for professional growth, consistent with theoretical models emphasizing collaborative supervision, reflective feedback, and context-sensitive guidance.

The results indicate that teachers generally perceive supervisory dialogue positively, particularly in terms of clear guidance, respect, and psychological safety. These factors enable teachers to align instructional practices with curriculum objectives and to engage in reflective discussion about classroom challenges. This aligns with previous work arguing that structured supervisory interactions accelerate the adoption of innovative teaching strategies (O'Sullivan, 2024; Breed et al., 2024). However, when con-

trusted with supervisors' perceptions, a notable divergence emerges: supervisors consistently rated dialogue quality higher than teachers did ( $t = -3.26$ ), suggesting a perceptual gap. This difference is theoretically important because it reflects asymmetries in supervisory power, expectations, and lived classroom realities—a finding consistent with literature in other developing contexts where supervisors often perceive dialogue as more effective than teachers experience it.

The results further show that supervisory dialogue significantly improves lesson planning. Teachers attributed this improvement to practical feedback, goal clarification, and reflective discussion with supervisors. These findings are consistent with Armour (2024) and Isaacson et al. (2024), who showed that supervisor guidance strengthens planning competence and pedagogical clarity. Importantly, these effects are not unique to Palestine; similar outcomes have been reported in Jordan, Morocco, and Kenya, where structured supervision has improved lesson planning despite resource-limited environments. This comparison highlights the broader relevance of the current study to developing education systems, where dialogue can serve as a low-cost but high-impact mechanism for strengthening teaching quality.

Regarding the effectiveness of physical education activities, the results confirm that high-quality dialogue enhances class organization, activity structuring, and student participation. This is aligned with Lubans et al. (2023) and Quested et al. (2023), who found that well-planned physical education sessions significantly improve students' mental health and physical activity. However, the current study adds a theoretical layer by showing how these improvements are mediated through supervisory dialogue an interactional mechanism that shapes teachers' instructional decisions. In Palestine's context, where class sizes are large and resources limited, this mechanism becomes even more critical.

Despite the generally positive perceptions, the study also revealed substantial structural and organizational obstacles—high administrative workload, limited time for dialogue, scarce resources, and large class sizes—that significantly impair dialogue quality ( $R = 0.63$ ). The coexistence of high perceived benefits and restrictive structural conditions appears contradictory, but theoretically it reflects two parallel realities: teachers value dialogue as a professional support mechanism, yet systemic constraints limit its implementation. Similar contradictions are documented in developing countries such as Egypt, Tunisia, and Ghana, where supervisory systems are overburdened and under-resourced, resulting in strong conceptual support for supervision but weak practical execution.

Another important finding is the presence of demographic differences influencing perceptions of dialogue quality. The significant variation by experience, qualification, and school location ( $F = 4.12$ ,  $p = .001$ ) highlights that supervisory dialogue is not experienced uniformly. For example, more experienced teachers and those working in urban areas demonstrated higher perceptions of dialogue quality. This suggests that contextual and human factors interact with supervisory mechanisms, shaping their impact. This finding resonates with the broader literature indicating that supervisory outcomes depend not only on supervisor skills but also on teacher background and school context (Richards et al., 2024; UNESCO, 2023). Theoretically, the study contributes to understanding dialogue as a relational, developmental, and context-sensitive construct. Practically, it identifies the need for structured supervisory time, reduced administrative burdens, more consistent supervisor training, and equity in supervision across demographic groups. Contextualizing these findings within Palestine and other developing countries underscores the importance of supervisory dialogue as a cost-efficient strategy for improving teaching quality despite systemic limitations.

## Conclusions

The findings of the current study indicate that constructive dialogue between physical education teachers and their educational supervisors plays a critical role in enhancing teaching practices, professional motivation, and student outcomes. Teachers reported overwhelmingly positive perceptions of supervisory dialogue, emphasizing clear guidance, mutual respect, regular communication, and constructive feedback as central to their professional growth. Dialogue was shown to positively influence lesson planning, instructional strategies, classroom organization, and the overall effectiveness of physical education activities. Improved student engagement, motivation, and enthusiasm also emerged as important indicators of the success of pedagogical interventions shaped by supervisor feedback. Despite these promising effects, the study revealed a number of structural, organizational, and individual barriers that



weaken the potential impact of supervisory dialogue. High administrative workloads, limited time for reflective discussion, large class sizes, resource constraints, and differences in experience or training between teachers and supervisors were identified as key challenges. These findings suggest that while supervision functions as a vital mechanism for professional development and instructional improvement, its effectiveness is constrained by the broader school environment and contextual limitations.

In interpreting these findings, several limitations must be acknowledged. First, the study relied primarily on self-reported data, which may introduce response bias and limit the objectivity of the findings. Second, the absence of observational or performance-based measures of dialogue quality restricts the ability to capture the full complexity of supervisory interactions. Third, the study was conducted exclusively in government schools in the West Bank, which limits the generalizability of the results to other regions or educational systems. These limitations should be addressed in future research by incorporating mixed data sources, expanding the geographical scope, and integrating more objective measures of supervision and classroom practice. Based on the findings, several actionable recommendations are proposed. Educational policymakers should prioritize allocating dedicated time for supervisory dialogue within teachers' schedules to ensure meaningful and uninterrupted professional conversations. Schools should reduce administrative burdens on teachers and supervisors to allow them to focus more fully on pedagogical development. Training programs should be strengthened to enhance supervisors' communication skills, feedback strategies, and capacity to support diverse teacher needs. Additionally, improving the availability of instructional resources and reducing class sizes would create more favorable conditions for implementing supervisory recommendations. Finally, professional development initiatives should be designed to promote equitable supervisory support across demographic groups, ensuring that all teachers—regardless of experience, qualification, or school location—benefit consistently from high-quality dialogue.

### **Recommendations**

Based on the findings of this study, the following recommendations are proposed:

1. Establish structured and protected supervisory meeting times within the weekly school schedule to ensure uninterrupted professional dialogue (SDG 4: Quality Education). This will allow teachers to reflect on their practices, address specific challenges, and receive timely, actionable feedback that directly supports instructional improvement.
2. Implement targeted capacity-building programs for teachers and supervisors focusing on communication skills, constructive feedback techniques, conflict resolution, and collaborative problem-solving (SDG 4.7; SDG 17: Partnerships for the Goals). Such training will enhance the effectiveness of supervisory interactions and promote ongoing professional learning.
3. Reduce administrative burdens by reallocating non-instructional tasks or introducing digital management tools to streamline routine processes (SDG 8: Decent Work & Economic Growth). Increasing schedule flexibility will enable teachers to more fully engage with supervisory dialogue and apply recommended strategies in their classrooms.
4. Invest in essential physical education resources, including age-appropriate sports equipment, safe play areas, and adequate facilities (SDG 4.1; SDG 9: Industry, Innovation & Infrastructure). Strengthening logistical and material support will improve teachers' ability to implement supervisor-guided instructional practices effectively.
5. Encourage inclusive and differentiated instructional planning during supervisory meetings to ensure activities meet the diverse needs of students based on ability, gender, and background (SDG 4.5: Equity in Education). Joint planning sessions should help teachers design activities that promote engagement and skill development for all learners.
6. Establish monitoring and evaluation mechanisms for supervisory dialogue by tracking teacher implementation, student engagement levels, and lesson effectiveness (SDG 4.c: Teacher Support and Development). These data-driven monitoring systems will support continuous improvement, institutional accountability, and evidence-based decision-making.

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