

**Analysis of Principal Supervision In the Development of Physical Education
Teacher Competence**Yoga Nugraha¹, Muhammad Nur Alif ^{2*}, Aam Ali Rahman³, Ayi Suherman⁴¹²³⁴Physical Education Study Program, Universitas Pendidikan Indonesia, Bandung, Indonesia**Keywords**

Academic
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Competence.

Abstract

This research analyzes academic supervision practices conducted by non-Physical Education (non-PE) principals to build the competence of Physical Education (PE) teachers at junior high schools in Sumedang Regency. Supervision is essential for maintaining learning quality, yet its application in PE is often limited by supervisors' technical constraints in understanding movement skills and sports pedagogy. This qualitative case study was conducted at two public junior high schools, SMPN 6 Sumedang (urban) and SMPN 4 Pamulihan (rural), involving seven informants: two non-PE principals and five PE teachers. Data were collected through in-depth interviews, observations, and documentation studies, then analyzed using NVivo software to identify thematic patterns in supervisory techniques. Findings show that principal supervision is organized around four dimensions: planning, implementation, interaction dynamics, and impact on teacher performance. Supervision positively contributes to teachers' pedagogical and professional competence, but its effectiveness is hindered by dominant one-way communication, generic assessment instruments, and lack of sustained follow-up. The study emphasizes the need for a more collaborative and adaptive clinical supervision approach to bridge the technical competency gap between non-PE principals and PE teachers, offering practical insights into how non-linear principals can structure supervision and assessment accountably to support PE teacher professionalism.

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INTRODUCTION

The academic supervision is an important administrative device to assure the quality of learning, notably in topics that have specific characteristics such as Physical Education, Sports and Health, whose teaching process is largely held on the field. In practice, PE supervision often degenerates into an administrative routine because school principals as supervisors do not master the substance of practical material and sports pedagogy, so the essential aspects of movement skill development are not properly observed (Wahyudi, 2020; Paturusi, 2021). This condition makes it impossible for the original objective of supervision to be achieved (improving instructional quality and teacher professionalism) in PE.

The disparity of competencies between PE teachers and school principals who do not have a background in PE causes severe challenges in performance appraisal. Principals who are not PE graduates generally have trouble in delivering constructive criticism on practical teaching strategies, safety in movement, and success in field-based learning methods (Suherman, 2020). Empirical findings showed that PE teachers perceived the supervision they received as subjective and too much focused on general classroom management, with little attention given to the achievements of students' physical competency and the development of motor skills (Nur, 2021). If this continues, the supervisory function is at risk of being viewed as a bureaucratic burden, rather than a real tool for professional development (Hardiyanto, 2021; Anshari, 2021).

Academic supervision is theoretically meant as professional support through a methodical cycle of planning, observation, and feedback to increase the quality of learning regardless of the academic background of the supervisor (Arikunto, 2020). However, in PE, principals who do not have expertise in sports education often only supervise by checking documents and administrative compliance, so that the essence of field-based instructional improvement, such as movement effectiveness, risk management, and student safety, is often ignored (Suharti, 2020; Kurniawan, 2022). The gap between the normative concepts of supervision and the technical implementation in PE causes an imbalance in communication, where teachers are more knowledgeable than the supervisor in practical material, which further reduces the authority and influence of supervision (Suherman, 2020).

Previous research on academic supervision has largely dealt with general impediments and management problems at the macro level, without proposing precise assessment techniques for PE practice. Wahyudi (2020) has conducted research to describe the basic problems faced by school principals, but has not been specifically formulated about ways for assessing teachers' technical competencies in sports practice. Anshari (2021) discussed the implementation of supervision from the standpoint of policy and management, but did not discuss the adaptation of evaluation tools to field-based observation in PE. Other studies state that the impact of supervision on the growth of motor skills and field safety for students is typically ignored since the supervisor does not grasp the specific content of sports (Nur, 2021; Paturusi, 2021). Existing research, in summary, tends to finish with the mapping of problems, rather than with the operational adaptive assessment models for non-PE principals.

This study fills two significant gaps in the literature. First, there is a paucity of research that particularly investigates how non-PE (non-linear) principals may objectively evaluate PE teachers' performance in movement effectiveness, safety, and sports pedagogy using appropriate assessment instruments. Second, there is hardly no study that systematically assesses the utilization of collaborative resources, such as peer supervision or involving senior PE teachers, as an integrated part of an academic supervision model for practical topics. Previous research (Wahyudi, 2020; Anshari, 2021; Suherman, 2020; Nur, 2021) has found obstacles and managerial problems, but has not formulated a concrete mechanism for the adaptation of instruments and collaborative validation so that principals who do not have a background in PE can still produce credible and accountable performance appraisals.

The urgency of this research is further supported by the state of junior high schools in Sumedang Regency in general, where the number of schools led by principals with a PE educational background is quite tiny, while the majority are non-linear. This composition raises questions regarding the objectivity of assessments and the direction of PE teachers' competency development, particularly in relation to student safety and the pedagogical

quality of physical activities (Paturusi, 2021; Kurniawan, 2022). Therefore, this research is intended to analyze in detail the supervisory practice of non-PE school principals in developing the competency of PE teachers at the junior high school level in the Sumedang Regency and formulate an adaptive clinical supervision model, through the adaptation of instruments and the use of collaborative resources, so that principals who do not have a sports technical background can provide substantive, credible, and accountable professional feedback.

METHODS

This research uses a qualitative research method with a case study approach to find out how non-linear school administrators perform academic supervision of teachers of Physical Education, Sports and Health. A case study design is used because the researcher intends to gain a deep understanding of the specific strategies, challenges, and assessment mechanisms used in real school settings that differ in geographic characteristics, i.e., an urban and a rural junior high school. This design enables the researcher to record the genuine complexity of professional interactions between principals and instructors of PE in realistic field settings not in controlled experimental settings.

The population of this research is all Junior High Schools in Sumedang Regency that conduct academic supervision by administrators who do not have a background in physical education for PE teachers. The population was then selected by purposive sampling on two schools based on three criteria: (1) the principal is not a graduate of PE (non-linear), (2) there are active PE teachers who are regularly supervised by the principal, and (3) the school represents different geographical characteristics (urban and rural). The selection of SMP Negeri 6 Sumedang was based on the criteria of an urban school with four PE teachers, whereas SMP Negeri 4 Pamulihan was picked based on the criteria of a rural school with one PE teacher, both in Sumedang Regency. The major informants in this study are two non-PE principals (one from each school) as supervisors and five PE teachers (four from SMPN 6 Sumedang and one from SMPN 4 Pamulihan) as supervisees. Additional criteria for informants on PE teachers are: at least two years of teaching experience, at least one supervisory experience in the last two years, and willing to be interviewees and give permission to access planning and supervising materials.

In this qualitative study, the researcher is the main instrument, as a human instrument who decides the focus of the study, selects the informants, collects the data, and interprets the findings. In support of this job, three types of auxiliary tools are utilized, namely: (1) semi-structured interview guides, (2) observation sheets, and (3) documentation review sheets. The interview guidelines are constructed to delve into the principal's supervision planning, the emphasis of observation, the usage and customization of assessment tools, the feedback and follow-up methods as well as the teachers' evaluation of objectivity and effectiveness of supervision. The observation sheet is utilized to observe systematically the actual supervisory process or classroom observations conducted by the principal that covers the learning context, the position and emphasis of the principal as well as what is being assessed. Review the PE lesson plans (RPP), principal's supervision forms, rubrics or checklists, and written feedback notes as guided by the documentation review sheet, to analyze the coherence between lesson planning, supervision focus, and improvement instructions provided.

Data collection was done through three main techniques: in-depth interview, observation and documentation study. First, face-to-face semi-structured interviews were conducted with the two administrators and five PE instructors in their respective schools. Each interview was audio-recorded with the informant's permission and lasted roughly 45-60 minutes, while the researcher collected field notes to document contextual and non-verbal information. The interviews with the principals were focused on their comprehension of PE supervision, techniques to overcome their non-linear background, criteria and tools used for evaluation, and patterns of feedback and follow-up. Interviews were conducted with PE teachers about their experiences being supervised by non-PE principals, their perceptions of fairness and depth of assessment, and the influence of supervision on their professional development. Second, the researcher conducted PE learning observations at least one time in

each school which was utilized as a supervision object by the principle (officially or informally). The researcher filmed the principal entering the field, what was actually observed (administration, pedagogy, movement techniques, safety, student participation) and how the data were recorded. Third, a documentation study was conducted by collecting and analyzing lesson plans, supervision instruments, and written records of feedback and follow-up from both schools to obtain authentic evidence of the supervision process and its impact on lesson planning.

Data analysis involved an inductive interactive model with data reduction, data display, and conclusion drafting. All interviews were transcribed verbatim and, together with field notes and documents, entered into the NVivo software program for systematic coding. The first codes were established during the open coding phase by identifying important segments linked to supervision planning, evaluation instruments, adaption techniques, perceived limits, and collaborative efforts. In the axial coding stage, these codes were grouped into broader categories such as “limitations of non-linear principals”, “strategies for instrument adaptation”, “teacher perceptions of objectivity”, “use of collaborative resources” and “differences between urban and rural schools”. At the selective coding stage, the primary themes were generated to explain the pattern of adaptive supervision of non- PE principals and the pattern of supporting or hindering PE teacher competency growth in both scenarios. NVivo was used not just to organize and retrieve coded data effectively, but also to compare themes across sites and to develop simple models of the relationships between categories to aid interpretation.

Several validation techniques were used to enhance the credibility and dependability of the findings. Source triangulation was done by comparing information from administrators and PE teachers in the same school on the same supervision incidents or processes. The technique of triangulation was used by cross-checking the interview data with observation and documented evidence such as RPP and supervision notes. Member checking involved providing summaries of preliminary interpretations to key informants to determine if the researcher’s knowledge was congruent with their experiences and to alter interpretations if required. Peer debriefing involved reviewing the coding, categories and emerging themes with methodological peers or advisers to assess the consistency and logic of the analysis . Finally, an audit trail was maintained by the researcher through systematic field notes, coding memos and recording of analytic decisions so that the process of data reduction and conclusion drawing could be followed and reviewed publicly.

RESULTS AND DISCUSSION

Data analysis using NVivo generated four main themes related to the supervision practices of non-linear school principals in developing the competencies of PE teachers, namely: (1) supervision planning, (2) implementation of supervision, (3) dynamics of supervision interaction, and (4) impact on teacher performance. These themes were obtained from the coding process of interview transcripts, observation notes, and documentation review, then grouped into main nodes and sub-nodes based on similarity of meaning and contextual relevance. The analysis results are presented through node classification, word frequency, mind map, project map, hierarchy chart, and narrative findings based on verbatim interview excerpts.

The coding process in NVivo shows that the supervision practices of school principals are dominated by themes related to implementation of supervision and impact on teacher performance. Meanwhile, themes related to collaborative reflection and social-personality competence appear in smaller portions. This pattern indicates that supervision has been carried out more as an operational activity of observation and feedback, but has not yet fully developed into a collaborative and reflective professional development process.

Table 1. NVivo Coding Table (Node, References, Coverage)

Main Node	Sub-Node	References	Coverage (%)
Supervision Planning	Annual program	18	12.4%
	Supervision scheduling	15	10.2%
	Supervision instrument	12	8.7%
Implementation of Supervision	Learning observations	25	18.5%
	Device evaluation	20	15.3%
	Feedback	17	12.9%
Dynamics of Supervision Interaction	One way communication	22	16.8%
	Collaboration/reflection	9	6.5%
	Professional relations	11	7.9%
Impact to Teacher Performance	Pedagogical competence	27	19.6%
	Professional competence	21	15.8%
	Social & personality competencies	10	7.1%

Based on **Table 1**, the most dominant sub-node in the implementation dimension is learning observations with 25 references and 18.5% coverage. In the impact dimension, pedagogical competence appears as the strongest finding with 27 references and 19.6% coverage. In contrast, collaboration/reflection only shows 9 references with 6.5% coverage, indicating that reflective and collegial supervision has not yet been optimally implemented.

The word frequency analysis in NVivo shows that the most frequently occurring words across interview, observation, and documentation data are terms closely related to the supervision process and teacher competency development, such as “supervision,” “observation,” “feedback,” “planning,” “teacher,” “competence,” “RPP,” and “principal.” This pattern confirms that the empirical data are strongly centered on the supervision process as an institutional practice and on the perceived effects of that process on PE teacher development.

In the urban school context, namely SMP Negeri 6 Sumedang, the dominant words tend to be associated with programmatic and organizational aspects such as “schedule,” “program,” and “instrument.” Meanwhile, in SMP Negeri 4 Pamulihan as the rural school context, more prominent words are related to contextual constraints such as “time,” “facilities,” “field,” and “conditions.” These differences indicate that the supervision discourse in the two schools is influenced by their organizational and environmental contexts.

The NVivo mind map places “supervision of non-linear principals” as the central theme connected to four major branches, namely supervision planning, implementation of supervision, dynamics of supervision interaction, and impact on teacher performance. Each branch is further connected to sub-themes that explain the internal structure of the supervision process.

The supervision planning branch is linked to the annual program, scheduling, and supervision instruments. The implementation branch is connected to learning observations, evaluation of teaching devices, and feedback. The interaction branch is related to one-way communication, collaboration/reflection, and professional relations. The impact branch is linked to pedagogical competence, professional competence, and social-personality competence. This mind map shows that the four dimensions are interconnected and form a systemic supervision pattern.

The NVivo project map shows the relationship between the research focus, data sources, and nodes generated from the analysis. In the first dimension, namely supervision planning and implementation, the main evidence comes from principal interviews, teacher interviews, observation notes, and supervision documents. In the second dimension, namely supervision interaction dynamics, the strongest evidence comes from interview transcripts and field notes that record the feedback process between principal and teacher. In the third dimension, namely the impact of supervision on teacher performance, the data are supported by teacher statements, changes in lesson planning documents, and notes on follow-up actions after supervision.

This project map confirms that each research dimension is supported by more than one source of data, thereby strengthening the internal consistency of the findings. The use of multiple sources also shows that the findings were not derived from a single perception, but from cross-validated qualitative evidence.

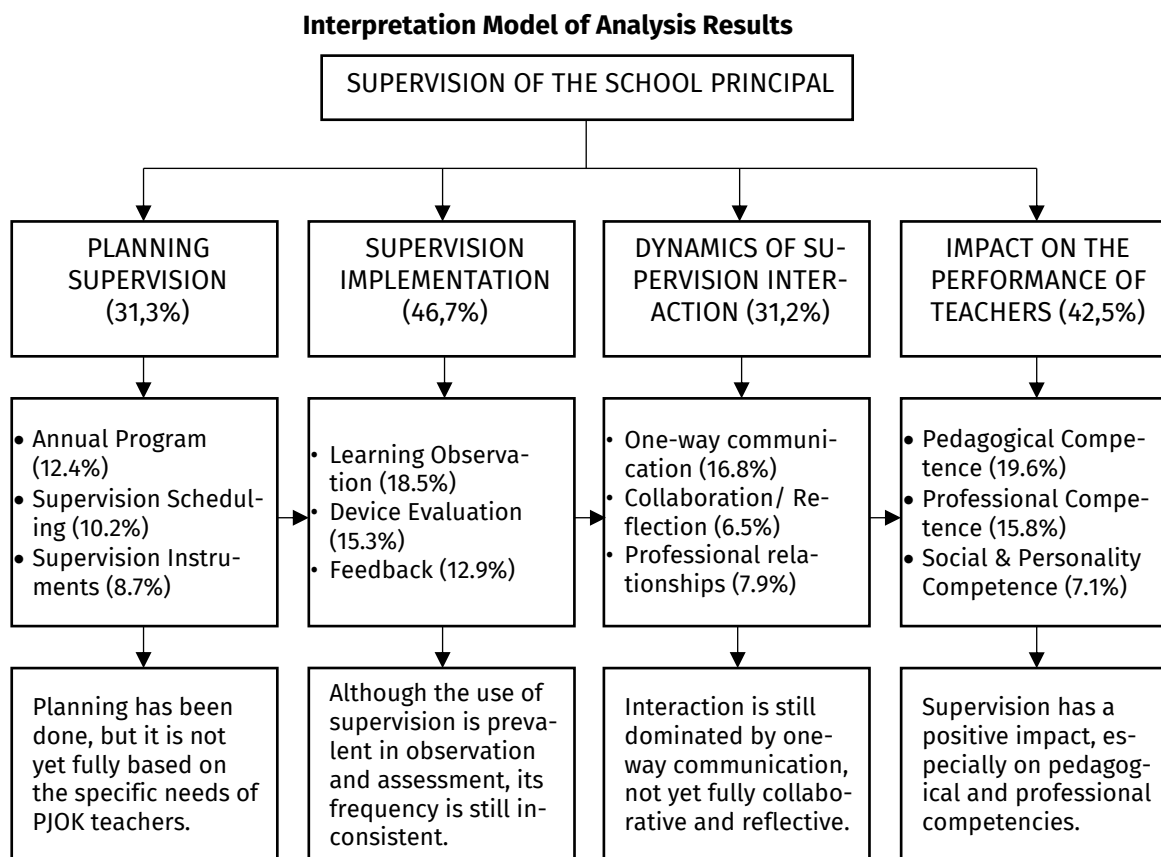


Figure 1. Interpretation Model of NVIVO Analysis Results

The NVivo hierarchy chart shows that the implementation of supervision is the most dominant main node, followed by the impact on teacher performance, supervision planning, and dynamics of supervision interaction. Within the implementation node, the largest proportion is found in learning observations and device evaluation. Within the impact node, the largest proportions are pedagogical competence and professional competence.

Meanwhile, the sub-node collaboration/reflection appears in the smallest block compared to other sub-nodes. This means that although supervision is formally conducted, the space for equal dialogue and reflective discussion between principals and PE teachers remains limited. The hierarchy pattern also shows that supervision has a stronger contribution to technical and instructional aspects than to relational and reflective aspects.

The findings show that supervision planning has been formally arranged through annual programs, supervision schedules, and supervision instruments. However, the planning is still general and does not specifically accommodate the characteristics of PE learning conducted in the field. One principal stated, "We have prepared the supervision program at the beginning of the year, but it does not specifically differentiate the needs of PE teachers from other subject teachers." This statement indicates that supervision planning is structurally available, but substantively not yet adapted to the unique demands of PE.

This finding is reinforced by a PE teacher's statement: "Sometimes supervision is scheduled, but it does not always match the actual learning conditions in the field." The statement shows a gap between formal scheduling and the practical realities of PE instruction. In other words, supervision planning is present administratively, but not always contextual in implementation.

The implementation of supervision is mainly carried out through direct observation of the learning process and evaluation of teaching devices such as lesson plans. Principals generally observe the class or field session, record important notes, and provide recommendations for improvement. One principal explained, "We conduct supervision by entering the class or field, observing the learning process, and then making notes for improvement."

However, teachers reported that the implementation is not always consistent and sustainable. One teacher stated, "Supervision exists, but it is not routine. Sometimes it is only once or twice in one semester." This finding indicates that the supervision process has been carried out, but the frequency and consistency are still weak. As a result, the developmental function of supervision has not yet operated optimally.

The dynamics of interaction between principals and PE teachers tend to be dominated by one-way communication. After the observation, principals usually provide direct comments and recommendations, but the opportunity for joint reflection is still limited. A teacher stated, "There is feedback, but very little two-way discussion or joint reflection." This statement indicates that the interaction pattern is still evaluative rather than collaborative.

Although the professional relationship between principal and teacher is generally maintained well, the data show that the interaction has not yet developed into a collegial supervision model. Teachers tend to receive directions rather than engage in equal professional dialogue. This finding suggests that interaction remains an important mediating factor in determining the effectiveness of supervision.

The data show that supervision contributes most strongly to pedagogical and professional competence. Teachers reported improvements in lesson planning, classroom and field organization, and teaching methods after receiving supervision. One teacher stated, "After supervision, I began to pay more attention to lesson planning and changed several teaching methods." This statement indicates that supervision can stimulate improvement in instructional practice.

However, the effect of supervision is not always sustainable. Another teacher stated, "The change is visible, but if there is no follow-up, things gradually return to normal." This shows that the impact of supervision is highly dependent on continuity and follow-up. The findings also indicate that the influence of supervision on social and personality competence is still relatively limited compared to its impact on pedagogical and professional competence.

The findings indicate that the supervision conducted by non-linear principals has been implemented formally through annual programming, scheduling, observation, and feedback. However, the supervision pattern remains predominantly general and administrative, especially at the planning stage. This means that supervision has not yet been fully designed according to the specific characteristics of PE as a practical subject conducted outside the classroom. This finding supports the view that supervision of PE tends to become administrative when supervisors do not adequately master the substance of physical education learning.

The strong emphasis on observation and evaluation of teaching devices shows that principals still position supervision mainly as a monitoring mechanism. In one sense, this is positive because supervision is actually taking place and produces instructional notes for teachers. However, the inconsistency of supervision frequency shows that the process is not yet continuous enough to function as sustained professional assistance. This confirms that supervision will have limited developmental value if it is conducted only occasionally and without systematic follow-up.

The findings on supervision interaction also reveal an important issue. Communication between principal and PE teacher is still mostly one-way, where the principal provides comments and directions while the teacher has limited room to engage in equal reflection. This pattern differs from the ideal concept of clinical and collaborative supervision, which emphasizes dialogue, shared analysis of teaching practice, and joint problem solving. In the context of PE, such collaborative interaction is important because principals with non- PE backgrounds may not fully understand the technical substance of movement learning, sports pedagogy, and student safety in the field.

Another important finding is that the strongest impact of supervision appears in pedagogical and professional competence. Teachers become more attentive to lesson planning, learning stages, and teaching methods after being supervised. This supports the argument that supervision can improve instructional quality when it provides clear direction and feedback. However, the impact remains stronger in visible instructional aspects than in deeper dimensions such as social competence, personality competence, and reflective professional growth. This means the current supervision model is still more corrective than transformative.

Compared with previous studies, this research offers a more specific contribution in the context of non-linear principal supervision of PE teachers. Previous studies generally focused on the general constraints of academic supervision or described supervision at a macro managerial level. This study goes further by showing, through NVivo analysis, that the main empirical problem lies not only in the existence of supervision, but in the mismatch between general supervision structures and the specific pedagogical demands of PE. This research also makes explicit that collaboration/reflection is the weakest dimension, even though it is precisely the dimension most needed when the principal lacks technical subject expertise.

The novelty of this study lies in its analysis of supervision through an adaptive lens. The findings imply that credible supervision by non- PE principals cannot rely solely on generic instruments and one-way evaluation. Instead, it requires contextual supervision planning, more specific supervision instruments for PE practice, stronger collaborative reflection, and systematic follow-up. In this sense, the study contributes not only by identifying weaknesses, but also by providing an empirical basis for developing a more adaptive and accountable supervision model for practical subjects such as PE.

CONCLUSION

Research shows that supervision by school administrators is vital in enhancing the PE teachers' competency, notably in the pedagogic and professional aspects. The most prominent dimension in the NVivo analysis findings is the execution of supervision. But the efficiency of supervision is highly determined by the quality of contact between the principal and teachers. The sustainable development of competences is limited by the fact that supervisory procedures are evaluative and characterized by one-way communication. In addition, the impact of supervision is less than optimal due to limited time, the absence of PE -specific supervision instruments, and weak follow-up mechanisms, so there is a need for transforming supervision into a more collaborative, contextual, and sustainable model in order to comprehensively improve PE teacher performance.

This study has various limitations that must be noted. First, this research was only conducted in two junior high schools in Sumedang Regency with few informants. So that the findings cannot be applied to all schools with non-linear principals. Second, the findings are based on self-reports and observations over a relatively short time frame, and

so may not reflect differences in supervision techniques over a longer period. Third, the research only highlights the principal and PE teacher's perception without involving other stakeholders such as the supervisor from the education office, students, or the school committee that can provide a wider view of the effectiveness of supervision.

The constraints suggest that future research should incorporate more schools with various geographical features and more samples of principals and PE teachers, so that the patterns of non-linear supervision may be mapped more fully. Future research can also include perspectives from external supervisors, students, and other stakeholders, and adopt a mixed-method approach to more objectively quantify the influence of supervision on teacher performance and student learning outcomes.

In practice, this study gives many practical recommendations for schools and educational authorities. At the school level, principals without the PE background need to develop and implement supervision instruments adapted to the characteristics of field-based learning, such as indicators of movement safety, outdoor activity organization, and student participation in physical tasks. Moreover, supervision sessions should be changed from one-way comments into structured reflective discussions, where administrators and PE teachers assess teaching practices together and develop tangible actions for development. At the education office level, it is necessary to establish training programs for non- PE principals to have basic knowledge of sports pedagogy. Collaborative supervision schemes can be facilitated by involving PE subject supervisors or senior PE teachers as co-supervisors. Technical guidelines may also be issued by the education authority that specify procedures of adaptive supervision for practical topics so that the development of PE teacher competences remains accountable even when principals are non-linear.

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