



## THE LEAN MANAGEMENT OF SPORTS AND SCHOOL ACTIVITY DIRECTORS AND ITS RELATION TO THE ADMINISTRATIVE EFFICIENCY OF TECHNICAL SUPERVISORS IN BAGHDAD'S EDUCATION DIRECTORATES

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### Abstract

Lean management has gained recognition in recent years as a practical approach in several public and educational organizations to reduce expenses, improve resource utilization, and increase service quality. In contrast, empirical information on its implementation in sports and school activity administration in developing educational systems and its connection to the administrative efficiency of technical supervisors is somewhat limited. The study sought to understand the role of lean management in the administrative efficiency of technical supervisors in school and sports activities in the directorates of education in Baghdad, including the development of an empirical study with the following: 1. Developing a measuring instrument for lean management dimensions and developing a measuring instrument for administrative efficiency 2. Validate the measuring instrument of lean management dimensions in administrative efficiency 3. Measure the extent of the impact of the lean management on the efficiency of the supervisors in the administration of sports and school activities in the directorates of education in Baghdad. The study employed a descriptive correlational design. The study population included all 208 technical supervisors in the Baghdad Education Directorates, encompassing Karkh 1, Karkh 2, Karkh 3, Rusafa 1, Rusafa 2, and Rusafa 3 directorates, and a census approach was applied. Two questionnaires were developed and utilized, namely, the Lean Management Questionnaire and the Administrative Efficiency Questionnaire. The collected data were subjected to statistical analyses using SPSS software to examine the relationships between variables. The validity, reliability, and strength of the correlation between variables were calculated using the survey sample. Results of the study indicated a positive, strong, and direct relationship between lean management and administrative efficiency among the technical supervisors of the directorates of education. Furthermore, lean dimensions, including teamwork cohesion, flexibility in decision-making, continuous improvement, and several others, showed a strong relationship with productivity, improved coordination, and effective administrative performance. The study concludes that the effective implementation of lean management can lead to administrative efficiency among technical supervisors in school and sports activities, thus confirming the study hypotheses. Continuous professional training, promoting a collaborative work culture, and developing decision-making competencies will be critical for reaping the maximum benefits of lean management in the educational directorates.

**Keywords:** Lean Management, School Activities, Administrative Efficiency, Technical Supervisor

## **1. Introduction**

One of the modern management methods that is widely used in various institutions and holds significant importance is lean management. This approach is applied across different fields and plays a crucial role in building societies and enhancing individual capabilities, particularly in sports and educational activities (Zhang, 2022). These activities are fundamental for personal development and help strengthen individuals' skills in the field of education (Athaya et al., 2023; Da'i et al., 2024; Hardinata et al., 2024). The directorates represent sports and school activity as one of the most important of these sports and educational institutions, as it includes a group of intertwined works, such as activities, mechanisms and available resources, and the element (Abeza et al., 2023; Sánchez & Torregrosa, 2005). The human being is considered one of the most important elements that organizes and distributes business and provides and uses resources. Therefore, the survival and development of the organization depend on how efficiently it is managed (Rafeeq, 2021).

Technical supervisors are essential in organizing, monitoring, and guiding school sports and scouting activities. Their role is vital in equipping these individuals with high-level administrative skills, which allow them to maintain an ideal balance between a quality educational and sporting environment while effectively managing sports and scouting activities (Sulaiman et al., 2025). Lean management, in its broadest sense, goes beyond traditional methods; it offers a strong capacity for adapting to the changes and challenges faced by educational administrations. This adaptability contributes to improved performance and the development of the administrative and technical competencies of supervisors.

The current study takes a position in the field of sport science, particularly the sub-fields of sport management, sport leadership, and management of school-based physical activity, given that lean management is introduced as an organizational framework and a set of leadership behaviors for managing school-based sport and scouting activities that are considered one of the pillars of the physical education system. The study inquires, in particular, how the framework is enacted by supervisory leaders in charge of managing sports and scouting activities, which is the directors of sport and education in the Directorate of Education in Baghdad, and their relationship with administrative efficiency of technical supervisors, while directing the scope to the elements of leadership behavior, decisional flexibility, teamwork, and continuous improvement. By addressing these foci, the study broadens the conversation around lean management, while bringing the lean conversation in a specific sub-area of educational administration, which is the management of school-based sport and physical activity, which is a central focus of the sport management field of inquiry and closely related to sport pedagogy.

In terms of the field of sport pedagogy, it is expected that effective and consistent management of sport and scouting programs translates to effective, efficient, and sustainable delivery of school-based physical activity experiences. This, in turn, is a central mechanism in building and sustaining education quality, learning environment, and students' motor, social, and leadership skills development. In this sense, the study shows how lean management, indirectly, facilitates pedagogical outcomes, through demonstrating the effect of lean on improved organizational efficiency and leadership enactment. While previous research has been carried out to look at the application of lean management in education, in which public schools and higher education were the units of analysis (Murnizu et al., 2024), the amount of



empirical research that inquires into lean management within the supervisory leadership structures that are in charge of the management of school-based sport and physical activity is limited. To a certain degree, the study of lean management in the context of the management of school-based sport and physical activity takes into account, specifically, the sports and scouting directors as the core subjects of the study, which also places the study within the scope of sport leadership and management fields of inquiry.

Conceptualizing the problem. The research problem has been theoretically framed within the sport science literature based on the Sport Organizational Effectiveness theories, Sport Organization Leadership theories, and Quality Management in Sport Programs theories. From the sport organizational effectiveness perspective, lean management conceptually aligns with systems-based approaches that emphasize the efficiency, goal attainment, resource optimization, and continuous improvement in the performance of sport organizations. In the context of school-based sport and activity programs, these principles are critical for ensuring effective coordination, sustainability of programs, and delivery of high-quality services. Moreover, the lean management concept is theoretically related to the quality management theories in sport programs, which emphasize the standardization of processes, reduction of non-value-added activities, and continuous quality improvement to optimize program outcomes. In the context of school-based sports and scouting activities, quality management principles are relevant for ensuring consistency in program implementation, effective supervision, and alignment between educational goals and sport development objectives.

The research problem was identified as: (How can lean management affect the efficiency of technical supervisors in Baghdad's education directorates in the field of sports and school activities). Study Objectives: To develop two questionnaires on lean management and administrative efficiency for technical supervisors. To identify the actual application of the principles of lean management in the administrative performance of technical supervisors in the field of sports and school activities. To identify the correlation between the administrative competencies of technical supervisors and the application of lean management techniques

## 2.Method

To achieve the study objectives, the researchers used the descriptive method with a survey approach and correlational analysis. The researchers prepared two questionnaires to assess the study's objectives, which focus on the variables of lean management and administrative efficiency. They established domains for each variable by reviewing relevant previous studies. Ultimately, five domains were identified for lean management and five for administrative efficiency. These domains were then presented to fifteen experts and specialists in the field of sports management.

The current study population was determined by the researchers by selecting all technical supervisors in the Baghdad Education Directorate, representing 100% of the total population. The population consisted of 208 technical supervisors distributed across the Baghdad Education Directorates (Karkh 1, 2, and 3, and Rusafa 1, 2, and 3). The researchers then divided the 208 technical supervisors into several samples, including a pilot sample, a reliability sample, and a main application sample. Table (1) illustrates the distribution and percentage for each sample.

**Table 1. Shows the population size, research sample size, pilot sample size, and application**

No.	Directorates	Technical supervisors	Reliability sample	pilot sample	preparation	Application sample
1	Karkh 1	33	3	3	13	14
2	Karkh 2	43	3	3	18	19
3	Karkh 3	29	3	3	11	12
4	Rusafa 1	38	3	3	16	16
5	Rusafa 2	31	3	3	12	13
6	Rusafa 3	34	3	3	14	14
<b>Total</b>		<b>208 (100%)</b>	<b>18 (9%)</b>	<b>18 (9%)</b>	<b>84 (40%)</b>	<b>88 (42%)</b>

An agreement was reached on four domains for the lean management variable, excluding the domain of flexible planning. Similarly, an agreement was reached on four domains for the administrative efficiency variable, excluding the domain of team motivation. The results are summarized in Table (2).

**Table 2. Shows the experts' agreement on the domains of the two questionnaires (lean management and administrative efficiency)**

Scale	Agreement	%	disagree	%	Acceptability
<b>lean management</b>					
<b>Flexible planning</b>	10	55	5	45	Rejected
<b>Managing collaborative teams</b>	14	93	1	7	Accepted
<b>Continuous improvement</b>	13	86	2	14	Accepted
<b>Flexibility in decision-making</b>	14	93	1	7	Accepted
<b>Rapid response to change</b>	15	100	0	0	Accepted
<b>administrative efficiency</b>					
<b>Strategic planning</b>	15	100	0	0	Accepted
<b>Effective decision-making</b>	14	93	1	7	Accepted
<b>Time and resource management</b>	13	86	2	14	Accepted
<b>Effective communication</b>	14	93	1	7	Accepted
<b>Team motivation</b>	7	46	8	53	Rejected

The researchers calculated the percentage for each domain and identified corresponding phrases. Some of these phrases were accepted, while others were rejected by experts after review. Table 3 presents the acceptance and rejection of the proposed phrases for each defined domain. A total of 28 phrases were identified for the "Lean Management" scale, and 28 phrases were identified for the "Administrative Efficiency" scale. However, two phrases from the Lean Management scale were rejected, resulting in a final total of 26 phrases. Similarly, two phrases were removed from the Administrative Efficiency scale, leaving it with a final total of 26 phrases as well. This information is summarized in Table (3).

**Table 3. shows the experts' agreement on the proposed phrases (lean management)**

<b>Managing collaborative teams</b>						
<b>No.</b>	<b>Phrases</b>	<b>Agreement</b>	<b>%</b>	<b>disagree</b>	<b>%</b>	<b>Acceptability</b>
1	lean management relies heavily on collaborative field teams.	10	55	5	45	Rejected
2	Collaborative field teams operate with a spirit of harmony and synergy.	13	86	2	14	Accepted
3	Collaborative teams possess a strong capacity for collective thinking and problem-solving in innovative and effective ways.	14	93	1	7	Accepted
4	In lean management, collaboration involves the active participation of all members without exception.	15	100	0	0	Accepted
5	Collaborative work teams promote both individual and collective effort.	14	93	1	7	Accepted
6	The lean management environment has a primary goal of collective success.	13	86	2	14	Accepted
7	Collaborative work teams help improve productivity by simplifying tasks and distributing work equitably.	14	93	1	7	Accepted
<b>Continuous improvement</b>						
1	Continuous improvement is the foundation of lean management.	14	93	1	7	Accepted
2	Lean management operates through a culture of continuous improvement within teams and organizations.	13	86	2	14	Accepted
3	Continuous improvement is facilitated and enabled through methods and strategies based on targeted results.	14	93	1	7	Accepted
4	Focusing on continuous improvement helps and permanently enhances individual and team skills, thereby boosting overall performance.	15	100	0	0	Accepted
5	Continuous improvement is encouraged through ongoing learning and experimentation with new methods.	14	93	1	7	Accepted
6	In an agile environment, continuous evaluation becomes a fundamental tool for reviewing areas for improvement.	15	100	0	0	Accepted
7	Continuous improvement within the lean management framework requires reviewing results and learning from mistakes to avoid repeating them.	14	93	1	7	Accepted
<b>Flexibility in decision-making</b>						

<b>1</b>	Flexibility in decision-making is a hallmark of agile management.	14	93	1	7	Accepted
<b>2</b>	Flexible decisions made by leaders depend heavily on their ability to adapt to changing circumstances.	13	86	2	14	Accepted
<b>3</b>	lean management strongly encourages and promotes well-informed decision-making based on available information.	14	93	1	7	Accepted
<b>4</b>	Flexibility in decision-making enables organizations to respond quickly and effectively to emergencies.	13	86	2	14	Accepted
<b>5</b>	Flexibility in decision-making helps organizations achieve better results while minimizing risks.	14	93	1	7	Accepted
<b>6</b>	The ability to make flexible decisions makes teams better prepared to face unexpected challenges.	13	86	2	14	Accepted
<b>7</b>	Flexible decisions contribute to faster workflows and innovation.	14	93	1	7	Accepted
<b>Rapid response to change</b>						
<b>1</b>	Lean management is based on rapid and effective response to changes in the environment.	14	93	1	7	Accepted
<b>2</b>	Rapid response facilitates change, which is a key feature of agile management.	13	86	2	14	Accepted
<b>3</b>	Lean management enables swift action to address evolving challenges.	14	93	1	7	Accepted
<b>4</b>	A rapid response to change allows management to capitalize on new opportunities before the competition does.	13	86	2	14	Accepted
<b>5</b>	A rapid response leads to the development of innovative solutions and new tools for dealing with change.	14	93	1	7	Accepted
<b>6</b>	Lean management helps teams become more resilient in dealing with sudden changes.	15	100	0	0	Accepted
<b>7</b>	The ability to respond quickly to change enhances a team's capacity for continuous improvement and the delivery of more adaptable solutions.	7	46	8	53	Rejected

**Table 4. Shows the experts' agreement on the proposed phrases (administrative efficiency)**

<b>Strategic planning</b>						
<b>No.</b>	<b>Phrases</b>	<b>Agreement</b>	<b>%</b>	<b>disagree</b>	<b>%</b>	<b>Acceptability</b>
1	Strategic planning is considered one of the most important and prominent areas of administrative efficiency.	14	93	1	7	Accepted
2	Strategic planning involves prioritizing and ranking objectives according to their importance.	13	86	2	14	Accepted
3	Strategic planning coordinates administrative activities with the overall vision of the organization.	14	93	1	7	Accepted
4	Administrative efficiency is embodied in the ability to develop feasible plans based on a thorough analysis of the internal and external environment.	14	93	1	7	Accepted
5	Good and effective planning allows for functional adaptation to changing circumstances.	13	86	2	14	Accepted
6	Successful and effective strategic planning helps the organization achieve its goals in an organized and consistent manner.	14	93	1	7	Accepted
7	Strategic planning must be realistically flexible, adapting to changes that may occur in the educational environment.	7	46	8	53	Rejected
<b>Effective decision-making</b>						
1	Effective decision-making is one of the most important criteria for managerial competence, contributing to the achievement of organizational goals.	14	93	1	7	Accepted
2	A competent manager is capable of making well-considered decisions that align with strategic objectives.	13	86	2	14	Accepted
3	Managerial decision-making involves considering all available alternatives for the organization, with the most suitable choice being made based on its objectives.	14	93	1	7	Accepted
4	Decisions that are consistent with the organization's values and the expectations of stakeholders must contribute to achieving sustainable success.	13	86	2	14	Accepted
5	True managerial competence lies in a manager's ability to make quick and sound decisions.	14	93	1	7	Accepted

<b>6</b>	Effective decision-making relies primarily on analyzing actual situations and available data, rather than on assumptions.	13	86	2	14	Accepted
<b>7</b>	A manager must balance various factors influencing a decision, such as effectiveness, cost, and time, to ensure the optimal outcome.	14	93	1	7	Accepted
<b>Time and resource management</b>						
<b>1</b>	Time management is one of the most essential characteristics of managerial efficiency, as it helps achieve goals.	14	93	1	7	Accepted
<b>2</b>	A good manager allocates time and resources correctly.	14	93	1	7	Accepted
<b>3</b>	Good time management requires prioritizing tasks and distributing them effectively.	13	86	2	14	Accepted
<b>4</b>	Efficient resource management helps reduce costs and increase resources by allocating them appropriately for different activities.	14	93	1	7	Accepted
<b>5</b>	Effective and correct time management helps determine the appropriate times for completing various tasks, thus improving overall performance.	15	100	0	0	Accepted
<b>6</b>	Managerial efficiency requires the ability to prioritize activities and postpone or eliminate less important ones.	13	86	2	14	Accepted
<b>7</b>	Utilizing available resources helps to identify the most important actual needs of the organization and avoid waste.	10	55	5	45	Rejected
<b>Effective communication</b>						
<b>1</b>	Effective communication is the foundation of managerial efficiency, enabling the clear and direct transmission of ideas.	14	93	1	7	Accepted
<b>2</b>	A good manager can deliver clear and inspiring messages to technical supervisors.	13	86	2	14	Accepted
<b>3</b>	Effective and good communication enhances everyone's understanding of strategic goals and ensures that everyone receives their due.	14	93	1	7	Accepted
<b>4</b>	Managerial efficiency requires the ability to listen attentively to individuals and provide responses that contribute to quick problem-solving.	15	100	0	0	Accepted
<b>5</b>	Effective communication helps avoid misunderstandings and	14	93	1	7	Accepted



	promotes transparency in the workplace.					
6	With good and understanding communication, technical supervisors can recognize the challenges facing the team and address them before they escalate.	13	86	2	14	Accepted
7	Effective and appropriate communication among all stakeholders facilitates coordination between different departments, contributing to improved overall performance.	14	93	1	7	Accepted

The two questionnaires were tested by the researchers on a sample of (18) technical supervisors who were randomly selected at a percentage of (9%) on Tuesday (9/9/2025) to ensure the ease and difficulty of the questions and the time taken to answer. The preparation sample was determined by the researchers and consisted of (84) technical supervisors, with a percentage of (40%), to obtain the scientific foundations (validity and reliability) on Sunday (9/14/2025). (75) valid forms were received, and (9) forms were rejected or did not arrive. The researchers established the face validity of the phrases and domains by distributing the questionnaire to experts to obtain their opinions on accepting or rejecting the statements, as shown in Table (5).

**Table 5. The apparent validity of the lean management questionnaire, as determined by experts, is shown.**

Managing collaborative teams		
No.	Phrases	Percentage
1	Collaborative field teams operate with a spirit of harmony and synergy.	86
2	Collaborative teams possess a strong capacity for collective thinking and problem-solving in innovative and effective ways.	93
3	In lean management, collaboration involves the active participation of all members without exception.	100
4	Collaborative work teams promote both individual and collective effort.	93
5	The lean management environment has a primary goal of collective success.	86
6	Collaborative work teams help improve productivity by simplifying tasks and distributing work equitably.	93
Continuous improvement		
1	Continuous improvement is the foundation of lean management.	93
2	Lean management operates through a culture of continuous improvement within teams and organizations.	86
3	Continuous improvement is facilitated and enabled through methods and strategies based on targeted results.	93
4	Focusing on continuous improvement helps and permanently enhances individual and team skills, thereby boosting overall performance.	100
5	Continuous improvement is encouraged through ongoing learning and experimentation with new methods.	93
6	In an agile environment, continuous evaluation becomes a fundamental tool for reviewing areas for improvement.	100
7	Continuous improvement within the lean management framework requires reviewing results and learning from mistakes to avoid repeating them.	93
Flexibility in decision-making		

1	Flexibility in decision-making is a hallmark of agile management.	93
2	Flexible decisions made by leaders depend heavily on their ability to adapt to changing circumstances.	86
3	lean management strongly encourages and promotes well-informed decision-making based on available information.	93
4	Flexibility in decision-making enables organizations to respond quickly and effectively to emergencies.	86
5	Flexibility in decision-making helps organizations achieve better results while minimizing risks.	93
6	The ability to make flexible decisions makes teams better prepared to face unexpected challenges.	86
7	Flexible decisions contribute to faster workflows and innovation.	93
<b>Rapid response to change</b>		
1	Lean management is based on rapid and effective response to changes in the environment.	93
2	Rapid response facilitates change, which is a key feature of agile management.	86
3	Lean management enables swift action to address evolving challenges.	93
4	A rapid response to change allows management to capitalize on new opportunities before the competition does.	86
5	A rapid response leads to the development of innovative solutions and new tools for dealing with change.	93
6	Lean management helps teams become more resilient in dealing with sudden changes.	100

**Table 6. shows the face validity of the administrative efficiency questionnaire by experts.**

<b>Strategic planning</b>		
No.	Phrases	Percentage
1	Strategic planning is considered one of the most important and prominent areas of administrative efficiency.	93
2	Strategic planning involves prioritizing and ranking objectives according to their importance.	86
3	Strategic planning coordinates administrative activities with the overall vision of the organization.	93
4	Administrative efficiency is embodied in the ability to develop feasible plans based on a thorough analysis of the internal and external environment.	93
5	Good and effective planning allows for functional adaptation to changing circumstances.	86
6	Successful and effective strategic planning helps the organization achieve its goals in an organized and consistent manner.	93
<b>Effective decision-making</b>		
1	Effective decision-making is one of the most important criteria for managerial competence, contributing to the achievement of organizational goals.	93
2	A competent manager is capable of making well-considered decisions that align with strategic objectives.	86
3	Managerial decision-making involves considering all available alternatives for the organization, with the most suitable choice being made based on its objectives.	93
4	Decisions that are consistent with the organization's values and the expectations of stakeholders must contribute to achieving sustainable success.	86
5	True managerial competence lies in a manager's ability to make quick and sound decisions.	93
6	Effective decision-making relies primarily on analyzing actual situations and available data, rather than on assumptions.	86
7	A manager must balance various factors influencing a decision, such as effectiveness, cost, and time, to ensure the optimal outcome.	87



<b>Time and resource management</b>		
1	Time management is one of the most essential characteristics of managerial efficiency, as it helps achieve goals.	93
2	A good manager allocates time and resources correctly.	93
3	Good time management requires prioritizing tasks and distributing them effectively.	86
4	Efficient resource management helps reduce costs and increase resources by allocating them appropriately for different activities.	93
5	Effective and correct time management helps determine the appropriate times for completing various tasks, thus improving overall performance.	100
6	Managerial efficiency requires the ability to prioritize activities and postpone or eliminate less important ones.	86
<b>Effective communication</b>		
1	Effective communication is the foundation of managerial efficiency, enabling the clear and direct transmission of ideas.	93
2	A good manager can deliver clear and inspiring messages to technical supervisors.	86
3	Effective and good communication enhances everyone's understanding of strategic goals and ensures that everyone receives their due.	93
4	Managerial efficiency requires the ability to listen attentively to individuals and provide responses that contribute to quick problem-solving.	100
5	Effective communication helps avoid misunderstandings and promotes transparency in the workplace.	93
6	With good and understanding communication, technical supervisors can recognize the challenges facing the team and address them before they escalate.	86
7	Effective and appropriate communication among all stakeholders facilitates coordination between different departments, contributing to improved overall performance.	93

The reliability of both questionnaires was confirmed using Cronbach's alpha on a sample of (75) technical supervisors. The reliability coefficient, calculated according to the formula, was (84) for the (Lean Management) questionnaire and (88.96) for the (Administrative Efficiency) questionnaire. This is shown in Table (7)(8):

**Table 7. shows the reliability (Cronbach's alpha) of the lean management questionnaire.**

<b>Managing collaborative teams</b>		
No.	Phrases	Cronbach's alpha
1	Collaborative field teams operate with a spirit of harmony and synergy.	77
2	Collaborative teams possess a strong capacity for collective thinking and problem-solving in innovative and effective ways.	87
3	In lean management, collaboration involves the active participation of all members without exception.	86
4	Collaborative work teams promote both individual and collective effort.	78
5	The lean management environment has a primary goal of collective success.	79
6	Collaborative work teams help improve productivity by simplifying tasks and distributing work equitably.	73
<b>Continuous improvement</b>		
1	Continuous improvement is the foundation of lean management.	98
2	Lean management operates through a culture of continuous improvement within teams and organizations.	78

3	Continuous improvement is facilitated and enabled through methods and strategies based on targeted results.	86
4	Focusing on continuous improvement helps and permanently enhances individual and team skills, thereby boosting overall performance.	89
5	Continuous improvement is encouraged through ongoing learning and experimentation with new methods.	76
6	In an agile environment, continuous evaluation becomes a fundamental tool for reviewing areas for improvement.	79
7	Continuous improvement within the lean management framework requires reviewing results and learning from mistakes to avoid repeating them.	76
<b>Flexibility in decision-making</b>		
1	Flexibility in decision-making is a hallmark of agile management.	77
2	Flexible decisions made by leaders depend heavily on their ability to adapt to changing circumstances.	98
3	lean management strongly encourages and promotes well-informed decision-making based on available information.	76
4	Flexibility in decision-making enables organizations to respond quickly and effectively to emergencies.	97
5	Flexibility in decision-making helps organizations achieve better results while minimizing risks.	76
6	The ability to make flexible decisions makes teams better prepared to face unexpected challenges.	90
7	Flexible decisions contribute to faster workflows and innovation.	87
<b>Rapid response to change</b>		
1	Lean management is based on rapid and effective response to changes in the environment.	87
2	Rapid response facilitates change, which is a key feature of agile management.	89
3	Lean management enables swift action to address evolving challenges.	87
4	A rapid response to change allows management to capitalize on new opportunities before the competition does.	86
5	A rapid response leads to the development of innovative solutions and new tools for dealing with change.	75
6	Lean management helps teams become more resilient in dealing with sudden changes.	97

**Table 8. shows the reliability (Cronbach's alpha) for the administrative efficiency questionnaire.**

<b>Strategic planning</b>		
No.	Phrases	Cronbach's alpha
1	Strategic planning is considered one of the most important and prominent areas of administrative efficiency.	77
2	Strategic planning involves prioritizing and ranking objectives according to their importance.	87
3	Strategic planning coordinates administrative activities with the overall vision of the organization.	89
4	Administrative efficiency is embodied in the ability to develop feasible plans based on a thorough analysis of the internal and external environment.	87
5	Good and effective planning allows for functional adaptation to changing circumstances.	88
6	Successful and effective strategic planning helps the organization achieve its goals in an organized and consistent manner.	98
<b>Effective decision-making</b>		
1	Effective decision-making is one of the most important criteria for managerial competence, contributing to the achievement of organizational goals.	77



2	A competent manager is capable of making well-considered decisions that align with strategic objectives.	87
3	Managerial decision-making involves considering all available alternatives for the organization, with the most suitable choice being made based on its objectives.	87
4	Decisions that are consistent with the organization's values and the expectations of stakeholders must contribute to achieving sustainable success.	65
5	True managerial competence lies in a manager's ability to make quick and sound decisions.	87
6	Effective decision-making relies primarily on analyzing actual situations and available data, rather than on assumptions.	99
7	A manager must balance various factors influencing a decision, such as effectiveness, cost, and time, to ensure the optimal outcome.	77
<b>Time and resource management</b>		
1	Time management is one of the most essential characteristics of managerial efficiency, as it helps achieve goals.	89
2	A good manager allocates time and resources correctly.	76
3	Good time management requires prioritizing tasks and distributing them effectively.	82
4	Efficient resource management helps reduce costs and increase resources by allocating them appropriately for different activities.	80
5	Effective and correct time management helps determine the appropriate times for completing various tasks, thus improving overall performance.	70
6	Managerial efficiency requires the ability to prioritize activities and postpone or eliminate less important ones.	76
<b>Effective communication</b>		
1	Effective communication is the foundation of managerial efficiency, enabling the clear and direct transmission of ideas.	87
2	A good manager can deliver clear and inspiring messages to technical supervisors.	76
3	Effective and good communication enhances everyone's understanding of strategic goals and ensures that everyone receives their due.	83
4	Managerial efficiency requires the ability to listen attentively to individuals and provide responses that contribute to quick problem-solving.	81
5	Effective communication helps avoid misunderstandings and promotes transparency in the workplace.	90
6	With good and understanding communication, technical supervisors can recognize the challenges facing the team and address them before they escalate.	87
7	Effective and appropriate communication among all stakeholders facilitates coordination between different departments, contributing to improved overall performance.	65

The study was conducted with a main sample of 88 technical supervisors, representing 42% of the total population, selected using a simple random sampling method. The survey distribution was conducted via an electronic link on Thursday, October 23, 2025. The researchers received 80 valid responses for statistical analysis.

### 3. Results and Discussion

The means and standard deviations for the lean management domains were calculated by analyzing the responses of the sample of 80 technical supervisors, as shown in Table (9):

**Table 9. Shows the arithmetic means and standard deviations for the (Lean Management) questionnaire**

Variables	mean	Std.	hypothetical mean	Degree of freedom	(t) value	
					Calculated	Sig
Managing collaborative teams	19.231	1.354	18	79	8.12	0.000
Continuous improvement	21.902	2.812	21	79	2.85	0.000
Flexibility in decision-making	21.886	1.761	21	79	4.54	0.000
Rapid response to change	18.871	1.302	18	79	6.69	0.000

Table (9) shows that the researchers found the arithmetic means for the domains to be higher than the hypothetical means, as the arithmetic mean for the domain of managing collaborative teams was 19.231 greater than the hypothetical mean 18, This indicates that managing collaborative teams through the lean management environment focused on building cohesive and harmonious teams that work in a spirit of teamwork and collaboration with others, as individual work has negative points and tendencies that are not preferred, especially in human groups and related circles, as it does not enhance the ability to think collectively (Turki, 2023) as well as working to solve problems effectively and innovatively, since one of the basics of lean management is that everyone must participate in the work effectively, which ensures the achievement of the general and specific goals of the organization (Al-Safyan, 2003).

On the continuous development domain, the obtained mean value  $M = 21.902$  was lower but almost at the level of the hypothetical mean  $M = 21$ . The managers' responses suggest that technical supervisors used this principle at an average level. The obtained results are consistent with the theoretical perspective, which assumes that continuous development is the most effective implementation method in the lean management system for sustainable development of organizations and the effectiveness of their work (Lean Six Sigma, 2015). On the basis of research in sport organizations, this model is recognized as a crucial factor for organizational learning, adaptability, and long-term success (Ali, 2023). Previous studies in sport management have emphasized that sport and school activity programs exist in dynamic environments with changing educational policies, resource constraints, and evolving participant needs; therefore, continuous development can help managers proactively address these challenges (Sulaiman et al., 2025). The obtained results can be interpreted in the context of sport organizational effectiveness models, which propose that a steady improvement in the level of managerial competencies and effectiveness can enhance coordination, quality of service, and overall performance in school-based sport programs (Suniga et al., 2025). A similar study was conducted in sport leadership, in which the authors concluded that the continuous professional development of supervisors increases their individual effectiveness and the performance of the entire team by innovative and reflective approaches.

On the flexibility in decision-making domain, the obtained mean value  $M = 21.886$  was almost at the level of the hypothetical mean  $M = 21$ . The obtained results confirm that technical supervisors use this principle at an average level. This result is consistent with the literature



in sport leadership and sport governance, which state that decision-making flexibility is a key leadership competency for effective performance in complex sport environments (Muhi, 2020). In lean management theory, decentralized decision-making and empowerment are promoted as methods to increase responsiveness and reduce bureaucratic delays. On the basis of research in school-based sport organizations, it was concluded that flexible decision-making is associated with faster problem-solving, better risk management, and the ability to address unexpected events such as scheduling conflicts, facility constraints, or participant safety issues (Bonci, 2011; Sánchez-Sánchez et al., 2023). In line with previous sport management research, the current results indicate that supervisors with adaptive decision-making skills are more likely to streamline administrative processes, encourage innovation, and ensure program continuity. This result supports the quality management perspectives in sport programs, which note that flexibility is a precondition for maintaining efficiency and meeting evolving stakeholder expectations.

Table 9 also shows that the arithmetic mean of 18.871 is close to the hypothetical mean of 18 for the rapid response to change variable. Rapid response to change is one of the fundamental principles upon which lean management is based. Through it, teams and management teams can provide a quick, effective, and adaptable response to the work environment, enabling them to adapt functionally and correctly to rapidly changing conditions with high efficiency. This ability to adapt correctly and effectively to sudden and unexpected changes gives teams the ability to take advantage of new opportunities before the competition can.

The researchers calculated the mean and standard deviations for the Administrative Efficiency Questionnaire. The calculated means were then compared with the hypothetical means for each domain to determine the significance of each domain. Table (10) shows the results.

**Table 10. Administrative Efficiency Questionnaire**

Variables	mean	Std. deviation	hypothetical mean	Degree of freedom	(t) value	
					Calculated	Significance
Strategic planning	18.032	1.612	18	79	7.46	0.000
Effective decision-making	22.564	1.910	21	79	8.58	0.000
Time and resource management	19.021	1.391	18	79	7.38	0.000
Effective communication	21.612	1.998	21	79	8.68	0.000

From Table (10), researchers can see, through the presentation of the arithmetic means, standard deviations, and comparison with the hypothetical mean for each domain, that Strategic planning is one of the most important domains of administrative efficiency, as it contributes significantly and noticeably to setting work priorities and organizing goals according to importance. Strategic planning is characterized by its broad ability to coordinate administrative activities with the overall vision of the directorate, which helps achieve all activities set with their objectives that support the major strategic goals. Administrative efficiency in this is manifested in the ability of managers to develop feasible plans based on an accurate analysis of the internal and external environment of the organization, which helps

and contributes to making well-considered decisions in order to achieve sustainable and continuous success. Good planning contributes to the correct functional adaptation to changing circumstances (Jiyad, 2022).

The importance of effective decision-making is well recognized by researchers. The arithmetic mean for decision-making effectiveness was found to be 22.564, which exceeds the hypothetical mean of 21. This suggests that effective administrative decision-making is a crucial criterion for achieving administrative efficiency. Through effective decision-making, managers of sports and school activities can steer the organization towards its strategic objectives. The administrative decision-making process requires careful evaluation of available alternatives and selecting the most suitable option based on established goals. The efficiency of the administration is significantly enhanced when managers can make quick and accurate decisions, largely informed by a thorough analysis of available data (Ahmed, 2009).

Table (10) shows the arithmetic mean for the field of time and resource management, which was obtained at 19.021, which is higher than the hypothetical mean of 18. Researchers attribute this to the fact that time and resource management is one of the fundamentals that support administrative efficiency, as a good and successful manager must always be able to allocate the necessary time and resources correctly, which helps to accomplish tasks with all efficiency and correctness. Good time management requires the correct determination of priorities continuously, which contributes to and helps to improve overall performance by distributing administrative tasks and executing them correctly and on time. Efficiency in resource management contributes to reducing expenditures in costs and working to increase productivity by allocating resources in accordance with the needs of basic activities. The ability to identify priority activities and eliminate less important activities will improve performance and ensure reaching goals promptly and at a lower cost (Jeffrey, 2021).

Regarding the area of effective communication, Table (10) shows the arithmetic mean, which reached 19.021, and the hypothetical mean, which is 18. Researchers attribute this to the fact that effective communication is the essential element that ensures the success of any work environment or institution. Clear and direct communication is a means that greatly and significantly helps in conveying ideas and enhancing the understanding of strategic goals. Through good effective communication, managers can deliver their messages and instructions in an inspiring, frank, and clear manner, which enhances and helps motivate the team and achieve coordination between different departments. Administrative efficiency in general also requires the ability to listen well to technical supervisors and provide them with all responses that contribute to solving and simplifying problems and working to enhance transparency in work in a clear manner (Al-Tayeb, 1999)

**Table 11. Correlation coefficient between lean management and administrative efficiency in the research sample**

<b>Variables</b>	<b>R Value</b>	<b>Error level</b>	<b>significance</b>
<b>Managing collaborative teams</b>	0.654	0.000	significant
<b>Continuous improvement</b>	0.659	0.001	significant
<b>Flexibility in decision-making</b>	0.569	0.000	significant
<b>Rapid response to change</b>	0.721	0.000	significant
<b>Total score</b>	<b>2.603</b>	<b>0.000</b>	significant



The results of Table (11) show that lean management and administrative efficiency in the directorates of sport and school activities are strongly related ( $P > 0.01$ ). This means that the use of a functional system of lean management to apply efficiency in these directorates is very important. According to the first domain, which is the effectiveness of sport programs, the following relationships with administrative efficiency are obtained: Sport program effectiveness is a logical prerequisite for a properly planned, implemented, and evaluated school-based sport and physical activity program. Essential programmatic elements include appropriate curriculum and activity offerings and well-trained instructors. At the same time, the availability of efficient administration is a necessary precondition for program delivery in the sport and school activity directorates. Lean management practices lead to less authoritarian leadership, more timely and efficient decision-making processes, and a more collaborative work environment, which is positively related to better communication, coordination, and supervision (T. S. Han et al., 2011; Murnizu et al., 2024).

In the field of sport management, it is often associated with higher program quality, better resource allocation, and greater consistency in the implementation of these programs. With more technical supervisors having the authority to make decisions in a timely and informed manner, programs can be more easily adapted to meet the needs of participants, logistical issues can be resolved more quickly, and disruptions to the planned physical activity opportunities that students receive can be reduced. The lean management of administrative affairs can provide a stable organizational environment that supports the sustained and well-managed delivery of school-based programs, which is important for long-term participation in physical activity. According to the third domain, which is sport pedagogy and the promotion of physical activity, the relationships related to administrative efficiency are obtained as follows: Although it may not have a direct effect on immediate physical activity participation, it has an indirect relationship with long-term physical activity participation. This relationship can be explained by the fact that it creates the right conditions for sport and school activity programs to be offered in a more accessible, well-structured, and enjoyable way to students (Cools et al., 2011; G.-S. Han, 2018; Krasnorutskaya et al., 2020). When administrative efficiency is high, there are fewer barriers to the implementation of these programs such as scheduling inefficiencies, resource misallocation, or delays in decision-making. As a result, students can continue their participation in school activities, physical education and sports clubs. Regular and long-term participation in physical activity is an important factor that is directly related to students' motivation, enjoyment, and adherence, which in turn has a positive impact on lifelong physical activity behavior.

#### 4. Conclusions

Strong cooperation among cohesive and harmonious work teams significantly contributes to improved productivity and teamwork. Continuous and ongoing evaluation facilitates lean management, as continuous development enhances the skills of individuals and groups. Flexible and adaptable decision-making is encouraged to adapt to changing circumstances. Planning was positive, effective, and well-designed, as it helps prioritize and organize goals according to their importance. Proper allocation of time and resources enhances the ability to prioritize and distribute tasks efficiently. Recommendations, The need to provide ongoing training for work teams on how to collaborate and coordinate effectively among technical supervisors. The need to provide training programs for management to

increase awareness of the importance of making informed decisions based on a thorough analysis of available data.

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