

Muhamad Noor Mohamed . Raja Nurul Jannat Raja Hussain .
Mardiana Mazaulan . Noor Azila Azreen Md Radzi .
Nurul Ain Abu Kasim . Nur Hani Syazwani Bakri .
Umami Khaltum Mohd Mokhtar . Mohd Aizzat Adnan .

Editors

Proceedings of the 1st International Summit Conference on Exercise Science, Sports Management, Outdoor Recreation, and Physical Education, ExSPORT 2024, 28th - 29th August, Malaysia

*Exporting Research Insights to Practical Applications in Sports
Turning Challenges into Opportunities*

ORGANIZED BY



IN COLLABORATION



SUPPORTED BY



The Analysis of Chelsea Performance Under Three Different Coaches During the English Premier League 2022/2023 Season



Aliff Azri, Noor Azila Azreen Md Radzi*, Mardiana Mazaulan, Nurul Ain Abu Kassim, Raja Nurul Jannat Raja Hussain, Muhamad Noor Mohamed, Muhamad Safiq Saiful Annur, and Maisarah Shari.

Abstract | The essence of a football club's success fundamentally hinges on its performance. In professional football, the dismissal of a coach is a significant and common occurrence, typically considered when the team's results fall short of the board's expectations. It is widely acknowledged among researchers that poor performance is a primary factor driving coaching changes. Despite extensive research on this subject, the impact of coaching changes on team performance remains ambiguous. Recent managerial changes at Chelsea have raised debate regarding their impact on team performance, reflecting a long history of trophy-chasing and frequent coach turnover. This study analyzed 38 matches of Chelsea FC from the 2022/2023 English Premier League season to evaluate and compare the team's performance under the coaching of Thomas Tuchel, Graham Potter, and Frank Lampard throughout their respective tenures. All matches were assessed based on the effectiveness and failure rates of short passes, long passes, shots, crosses, and tackles. One-way ANOVA revealed significant differences ($p < 0.05$) in two performance indicators (unsuccessful short passes and unsuccessful shots) across the three coaches. The results suggest a notable decline in team performance following each coaching transition. The findings of this study indicate that changes in coaching can cause destabilization within a team's internal structure and staffing, potentially leading to a decline in performance. Coaches typically require at least one year to implement tactical changes effectively and ensure that players adapt to their strategic approach. The limited duration of less than a year provided to Chelsea's coaches has likely contributed to a decline in team performance.

Keywords: *Football, coach, performance indicator.*

A., Azri, N.A.A., Md Radzi* (✉), M., Mazaulan, N.A., Abu Kassim, R.N.J., Raja Hussain, M.N., Mohamed, and M.S., Saiful Annur.

Faculty of Sports Science and Recreation, Universiti Teknologi MARA Negeri Sembilan Branch, Seremban Campus, Malaysia.

*Corresponding author: azila_azreen71712@uitm.edu.my

M., Shari.

Faculty of Sports Science & Recreation, Universiti Teknologi MARA, Shah Alam Campus, Malaysia.

I. INTRODUCTION

Football, sometimes referred to as soccer, is a team sport typically consisting of eleven players. Two 45-minute halves make up a regulation game, with a 15-minute intermission [1]. Gus Mears bought the Stamford Bridge athletic stadium with the goal of turning it into a football field in 1904, which marked the founding of Chelsea Football Club [2]. Chelsea has faced difficulties recently that have been linked to the managerial style; many managers have been hired, fired, and some have resigned to avoid the embarrassment of receiving a letter of termination, which they view as a black mark on their resume [2]. In sports analysis, performance indicators are variables chosen and combined to define specific aspects of performance and contribute to success [3]. Finding one's own team's strengths and weaknesses is the primary goal of match analysis, as doing so allows one to focus on improving and developing the former. Analyzing an opponent's performance, a coach will do the same to find ways to counter that team's advantages and take advantage of its disadvantages [4]. This study aims to compare Chelsea's performance indicators (short pass, long pass, shots, cross, and tackle) between Thomas Tuchel, Graham Potter, and Frank Lampard during the 2022/2023 season.

II. METHODS

The research design for this study is causal comparative, also known as ex-post facto research design. A total of 38 football matches ($N = 38$) from the 2022/2023 English Premier League season were examined in this study: 6 games from Thomas Tuchel, 29 from Graham Potter, and 9 matches from Frank Lampard. All the video recordings, which ranged in length from 90 to 100 minutes, were complete matches. The video footage was carefully collected and recognized before processing. The analysis was conducted using Nacsport Video Analysis Software, a specialized software for sports performance analysis, that has been used to gather the data. For each match, there is a 24-hour rest period in between to ensure accurate results. Every match is viewed and examined twice to boost the validity and dependability of the data. Each performance indicator has been separated into two different categories, which are successful and unsuccessful. The demographic data were described using descriptive analysis, and inferential statistics were utilized to show the comparison of performance indicators between the three coaches. One-way ANOVA was used to compare the performance indicators of the three coaches. Jamovi version 2.3.28.0 was utilized for the analysis, and a significance level of $p < 0.05$ was established.

III. RESULTS AND DISCUSSION

Since all the data was normal, a one-way analysis of variance (ANOVA) was conducted to compare the performance indicators between the three coaches. Based on Table 1, it showed that between the three coaches, there were significant differences in 2 out of 10 performance indicators ($p < 0.05$). Since the p-values for the remaining eight variables were higher than 0.05, there were no discernible differences between them. A line chart showing the mean score of indicators with significant differences between the three coaches is also shown in Figure 1.

TABLE I
ANALYSIS OF PERFORMANCE INDICATOR AND COACHES

Variable	Sum of Squares	Df	Mean Square	F	p
Short Pass Successful	889	2	445	0.060	0.451
Short Pass Unsuccessful	5864	2	2932	22.8	0.001*
Long Pass Successful	59.2	2	29.6	0.634	0.536
Long Pass Unsuccessful	83.2	2	41.6	0.700	0.503
Shots Successful	42.9	2	21.46	2.71	0.081
Shots Unsuccessful	120	2	60.1	4.58	0.017*
Crossing Successful	11.5	2	5.73	1.06	0.357
Crossing Unsuccessful	43.4	2	21.7	0.765	0.518
Tackle Successful	8.28	2	4.14	0.272	0.76
Tackle Unsuccessful	14.3	2	7.17	0.514	0.491

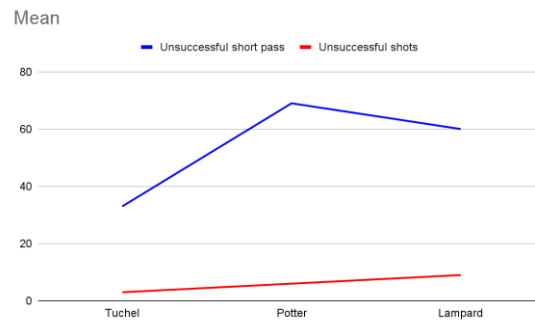


Fig 1. Mean differences between the three coaches

A. *Unsuccessful short pass*

Firstly, an unsuccessful short pass with a p-value difference of less than 0.001 between Frank Lampard, Graham Potter, and Thomas Tuchel. Among the two coaches, Thomas Tuchel has the lowest mean (33), while the other two have much higher means (69 and 60) for unsuccessful short passes. In football, quick transitions, teamwork, and possession retention all depend on short passing [5]. By breaking through the opponent's defense and passing the ball quickly and accurately between players, teams can create scoring opportunities [6].

B. *Unsuccessful shots*

The p value between Frank Lampard and Thomas Tuchel is 0.013 after that, indicating a significant difference in coaches and missed shots. There isn't much of a distinction between Frank Lampard and Graham Potter, nor between Thomas Tuchel and Graham Potter. With a 28.1% unsuccessful shot percentage over the course of all games, Thomas Tuchel has the lowest percentage. Conversely, Frank Lampard has a percentage of 68.1%, and Graham Potter has a percentage of 51.3%. In football, the ability to kick the ball or shoot is important because it influences the likelihood of creating chances for goals against the opposition [7].

IV. CONCLUSIONS

This study compared Chelsea's performance indicators short passing, long passing, shooting, crossing, and tackling under Thomas Tuchel, Graham Potter, and Frank Lampard during the 2022/2023 season. Mid-season coaching changes showed short-term improvements, but ongoing coaching proved better for long-term success. Data indicated that under Tuchel, Chelsea had the fewest unsuccessful shots and passes. His focus on tactical precision and effective offensive strategies increased goal conversion, which is essential for winning matches.

REFERENCES

- [1] B. Ekblom, "Applied physiology of soccer," *Sports Medicine*, vol. 3, pp. 50-60, 1986.
- [2] C. N. Dickson, D. Joseph, S. A. Samaila, and D. Emmanuel, "Managerial Skills and Productivity in an Organization: A Comparative Analysis of the Approaches of Lampard and Tuchel of Chelsea Football Club," *LAPAI International Journal of Management and Social Sciences*, vol. 13, no. 2, pp. 70-82, 2021.
- [3] M. D. Hughes and R. M. Bartlett, "The use of performance indicators in performance analysis," *Journal of Sports Sciences*, vol. 20, no. 10, pp. 739-754, 2002.
- [4] C. Carling, J. Bloomfield, L. Nelsen, and T. Reilly, "The role of motion analysis in elite soccer: contemporary performance measurement techniques and work rate data," *Sports Medicine*, vol. 38, pp. 839-862, 2008.
- [5] E. Matheus, L. Rocha, I. Wallan, T. Carlos, N. Norberto, and F. Fischer, "Performance indicators to be explored in order to win Premier League matches," *Research, Society and Development*, vol. XX, no. XX, 2023.
- [6] I. Rumi, G. Elumalai, S. H. Azmi, and U. Ubaidillah, "Biomechanical analysis of long pass in U-19 women football players," *International Journal of Nonlinear Analysis and Applications*, vol. XX, no. XX, 2021.
- [7] E. Schulze, B. Mendes, N. Maurício, B. Furtado, N. Cesário, S. Carriço, and T. Meyer, "Effects of positional variables on shooting outcome in elite football," *Science and Medicine in Football*, vol. 2, no. 2, pp. 93-100, 2018.