

## Original article

# Speaking the Same Game: An Analysis of Evidence-Informed Communication Training on Coaching Behaviors and Collegiate Soccer Performance

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## Abstract

**Background:** In the high-pressure environment of collegiate soccer, effective communication is vital for tactical execution, yet it often remains intuitive rather than intentional, leading to increased cognitive load for players. This study addresses the research gap linking structured communication training to objective on-field performance measures.

**Methods:** A quasi-experimental, longitudinal design was used to evaluate a nine-month communication curriculum involving three coaches and ten collegiate student-athletes. Data were collected using the Coaching Behavior Questionnaire (CBQ) and the Game Performance Assessment Instrument (GPAI). **Results:** Results indicated a statistically significant shift from directive "Informing" behaviors to non-directive "Supporting" and "Exploring" behaviors in coaches. Players showed significant improvements across all GPAI metrics, with total scores increasing from 66.50 to 94.80. **Conclusions:** This study demonstrates that transitioning from intuitive to intentional communication successfully bridges the gap between coaching behaviors and execution on the pitch. Reducing unnecessary cognitive load through "narrative need" and the "deep inquiry", coaches can accelerate trust and familiarity, increasing player technical and tactical performance. The "Skeletal Model" therefore provides a scalable, evidence-based framework to optimize relationship-building and player performance.

**Keywords:** Evidence-informed pedagogy, athlete temperament, cognitive load theory, coaching behavior questionnaire (CBQ), instructional inquiry, tactical development

## Introduction

In the pressure-filled environment of collegiate soccer, a coach's effectiveness is traditionally measured via tactical mastery and the development of team cooperation. This development relies on a complex partnership between a coach's technical knowledge and a foundation of relational variables—specifically trust, familiarity, and openness—that serve as the necessary conduits for all instruction (Bayraktar et al., 2025). When the relationship foundation is solid and secure between a player and a coach, effective communication is the primary means of translating tactical theory into on-field execution (Zubić, 2024).

Despite this, communication in coaching is often overlooked and treated as intuitive rather than intentional, evidence-based practice (Collins et al., 2016; Lath et al., 2021; Roberts et al., 2020). The reliance on intuitive coaching can create a hurdle to player development (Lindsay & Spittle, 2024), as unstructured communication practices can unintentionally overload and saturate a player's cognitive load, thereby impeding development (Davis et al., 2024).

When student-athletes have to sort through too much instructional “noise,” it begins to eat up the mental space needed to make quick in-game decisions, resulting in a gap between what the coach is asking for and what actually shows in the player's performance (Moran et al., 2023). The current literature reveals a clear gap in this area; while existing research shows that coach training can shift verbal interactions and strengthen coach-athlete relationships (Haugan et al., 2021), no studies to date have examined targeted, communication-focused training curricula while simultaneously measuring outcomes using both the Coaching Behavior Questionnaire (de Haan & Nilsson, 2017) and the Game Performance Assessment Instrument (Oslin et al., 1998) within a soccer context.

To address this disconnect and reduce the impact of excessive cognitive demand, a targeted eight-month intervention was conducted in 2025 as part of an ongoing longitudinal study. The intervention introduced four specific training modules—Coaching as Persuasion, the Three Lanes Concept, The Power of Inquiry, and Looping—designed to move the coaching staff away from intuitive communication habits and toward more intentional, evidence-informed communication strategies. By evaluating the value of this curriculum, the present study sought to determine whether structured shifts in coaching behaviors—specifically in the Informing and Supporting categories—correlate with improved player performance results, while also examining the potentially moderating role of individual player temperament.

This study examines coach-player communication within collegiate athletics. The specific problem is that coaching tactical instructions are often more intuitive than intentional, increasing student-athletes' cognitive load and limiting tactical performance. This challenge is reflected in the gap between the directives the coach provides and the execution in high-pressure moments. The existing literature leaves important questions unanswered. There is a clear lack of research linking communication-focused training to objective performance measures, namely the Coaching Behavior Questionnaire (CBQ) and the Game Performance Assessment Instrument (GPAI), within a longitudinal soccer context. By addressing this gap, the present study offers a framework designed to improve both instructional efficiency and athletic performance.

The purpose of this study was to examine the impact of a nine-month communication training intervention on coaching behaviors and player performance for a Midwestern collegiate soccer team. The independent variable is the 2025 communication training curriculum (Coaching as Persuasion, Three Lanes Concept, The Power of Inquiry, and Looping). The dependent variables are coaching behaviors, as measured by the CBQ, and player tactical performance, as measured by the GPAI. Individual player temperament as measured by the Personality Plus test (LPP), by Florence Littauer (Littauer, 1992) was examined as a moderating variable controlling for baseline performance.

## Research Questions and Hypotheses

**Research Question One (RQ1):** What is the impact of the communication training program on coaching behavior categories as measured by the CBQ?

*Null Hypothesis ( $H_{01}$ ):* There is no statistically significant difference in coaching behavior categories following the implementation of the communication training program.

*Alternative Hypothesis ( $H_{a1}$ ):* There is a statistically significant difference in coaching

**Research Question Two (RQ2):** What is the effect of the communication training program on player tactical performance metrics as measured by the GPAI?

*Null Hypothesis ( $H_{02}$ ):* There is no statistically significant difference in player tactical performance metrics following the implementation of the communication training program.

*Alternative Hypothesis ( $H_{a2}$ ):* There is a statistically significant difference in player tactical performance metrics following the implementation of the communication training program.

**Research Question Three (RQ3):** To what extent does player temperament influence post-intervention tactical performance scores when controlling for baseline performance levels?

*Null Hypothesis ( $H_{03}$ ):* There is no statistically significant effect of player temperament on post-intervention GPAI scores when controlling for baseline performance.

*Alternative Hypothesis ( $H_{a3}$ ):* There is a statistically significant effect of player temperament on post-intervention GPAI scores when controlling for baseline performance.

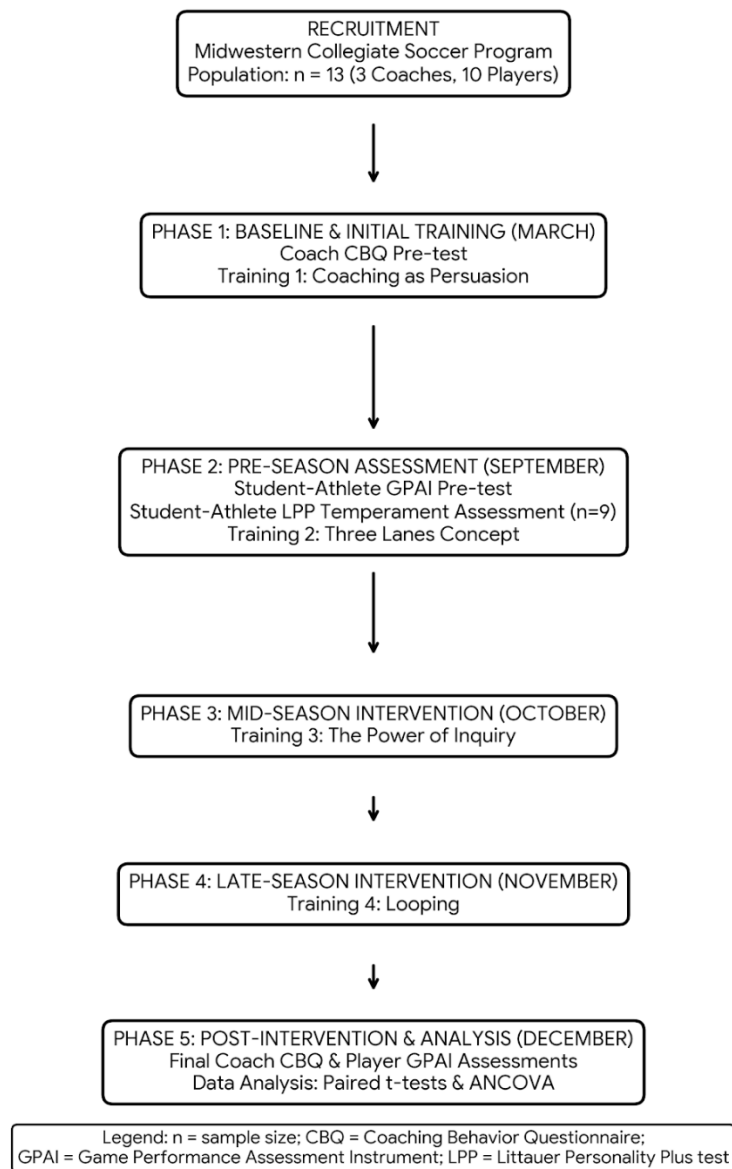
## Materials and Methods

### Experimental Approach

The study employed a quasi-experimental design to evaluate the effectiveness of an evidence-based communication intervention. This study conducted during the fifth year of a longitudinal investigation into a collegiate soccer program, examined coaching communication. Coaching communication behaviors and player performance were measured using a pre-test/post-test design throughout the 2025 season, following the 9-month training program.

### Participants

A Midwestern college soccer program ( $n = 13$ ) was used as the population in this study. Participants included  $n = 3$  coaches and  $n = 10$  sample student athletes. The coaching staff consisted of  $n = 1$  head coach and  $n = 2$  assistant coaches. The student-athletes comprised  $n = 10$  field players, all new additions to the soccer team during the 2025 school year. This study was approved by the IRB (No. 24111202). Informed consent was obtained. Figure 1 illustrates the longitudinal progression of the study, mapping the recruitment of the participant cohort through the four specific communication training modules and the corresponding assessment timeline from March to December.



**Figure 1.** Participant flow and study progression timeline.

### **Measurements and Procedures**

*Coaching Behavior Questionnaire (CBQ):* The CBQ was used as a self-assessment tool for the coaching staff to measure their perceived instructional styles. The instrument contains 18 forced-choice questions, each with four statements, in which participants allot exactly 10 points, for a total of 72 items. It assesses six coaching behavior dimensions falling under two larger dimensions:

1. Directing Behaviors: Prescribing, Informing, and Confronting.
2. Non-directing Behaviors: Supporting, Exploring, and Releasing.

The CBQ is a validated instrument that measures change in the proportions of directive and non-directive behaviors.

*Game Performance Assessment Instrument (GPAI)*: Player tactical performance was assessed using the GPAI (Oslin et al., 1998), as in previous studies (Hinchman et al., 2023; 2024). The head coach served as the sole observer, rating the nine students on six performance variables: teamwork/support, position/direction, trapping, dribbling, passing, and total performance. Each variable was assessed using a 20-point rating rubric:

- 0–4: Below expectations
- 5–9: Needs improvement
- 10–15: Meets expectations
- 16–20: Exceeds expectations

*Temperament Assessment (LPP)*: The students-athletes' temperaments were assessed using the LPP (Littauer, 1992). The LPP identifies the four primary temperaments (Sanguine, Choleric, Melancholy, Phlegmatic). The LPP was administered to 9 of the 10 student-athletes to measure their basic temperament characteristics as a mediating variable in their performance.

### ***Intervention***

The 9-month intervention occurred from March 2025 to December 2025. Coach responses to the CBQ were collected at the pretest (March 2025) before the training began. The data on the student athletes' responses to the GPAI were collected three times over the course of the season, allowing changes in performance to be tracked. However, to fit the pretest-posttest design of the current study, only the first (pre) and last (post) GPAI assessment data were used in the analyses.

During the intervening periods (March and December CBQ self-assessments), a total of four training sessions were undertaken by the coaching staff:

Module 1: Coaching as Persuasion: This module reconceptualized coaching as a means of persuasive influence, emphasizing the crucial importance of trust and empathy in moving an athlete toward a state of self-regulated performance. Coaches were prompted to structure their sessions to enhance their athletes' self-coaching abilities rather than to provide directive instruction. One aspect of the module was "Narrative Need", which taught how important it was for coaches to explain to their student-athletes exactly what was required of them and avoid any incorrect or limited perceptions of what they were doing. The "COP" Model (Case, Observe, Profile) was introduced to help coaches understand players' "egocentric anchors." The coaches were trained in the "Chameleon Effect" to build identification and trust, using linguistic tools such as Barnum Statements and Rainbow Ruses to foster a deep personal understanding.

Module 2: Three Lanes Concept: Coaches were trained to categorize communication into three distinct streams:

1. The Practical Lane: Focuses on tactical facts, strategy, and logistics.
2. The Emotional Lane: Focuses on empathy and acknowledging players' feelings to establish trust.
3. The Social Lane: Focuses on belonging, addressing a player's reputation and fit within the team hierarchy.

Module 3: The Power of Inquiry: This module addressed the "Why Trap," where closed-ended or accusatory questioning triggers defensive postures. Coaches were trained to use "Deep Inquiry"—open-ended questions focusing on underlying thoughts rather than mistakes. This shift is designed to move players from the "Emotional/Defensive" system into the "Rational/Analytical" system, reducing cognitive demand.

Module 4: Looping: This module introduced coaches to the 'Looping' process as the mechanism that makes the athlete 'feel heard' which consisted of two actions: Step one involves listening to, then reflecting and

summarizing the athlete's problem in the coach's own words and, step two is asking for validation ("Did I hear that correctly?")

Self-reported CBQ posttest measures were administered in December 2005, following completion of the training curriculum.

### Statistical analyses

To address RQ1, a series of paired-samples *t*-tests were conducted to evaluate the impact of the eight-month communication training program on the six behavioral categories of the Coaching Behavior Questionnaire (CBQ). The analysis compared self-assessment scores collected in March 2005 (pretest) to those collected in December 2005 (posttest). Similarly, to address RQ2, a series of paired-samples *t*-tests were conducted to evaluate changes in player tactical performance across six metrics: Teamwork/Supporting, Position/Direction, Trapping, Dribbling, Passing, and Total GPAI. The analysis compared head-coach ratings from the beginning of the season (Interval 1) to the end of the season (Interval 3). To address RQ3, a one-way analysis of covariance (ANCOVA) was conducted to determine the extent to which player temperament influenced post-intervention tactical performance scores ( $n = 9$ ) while controlling for baseline (pretest) performance levels. The posttest GPAI was the dependent measure, temperament categories were the independent variable, and pretest GPAI was the covariate to control for pretest performance. To estimate the effect size, the partial eta squared ( $\eta_p^2$ ) was computed. All statistical analyses were conducted using IBM SPSS Statistics (Version 31.0; IBM Corp., 2025), with the threshold for statistical significance set at  $p < .05$ .

### Results

Statistically significant differences were observed in two of the six behavioral categories: Informing and Supporting. There was a significant decrease in Informing behaviors from pretest to posttest and a significant increase in Supporting behaviors from pretest to posttest. No statistically significant differences were found for Prescribing, Exploring, Confronting, or Releasing (Table 1).

**Table 1.** Paired Samples T-Test Results for Coaching Behavior Questionnaire (CBQ) Categories.

| Category     |             | Pretest <i>M</i> ( <i>SD</i> ) | Posttest <i>M</i> ( <i>SD</i> ) | <i>t</i> | <i>df</i> | <i>p</i> (two-tailed) | Cohen's <i>d</i> |
|--------------|-------------|--------------------------------|---------------------------------|----------|-----------|-----------------------|------------------|
| Directive    | Prescribing | 30.67(4.04)                    | 30.67(1.53)                     | 0        | 2         | 1                     | 0                |
|              | Informing   | 41.00(3.61)                    | 32.67(2.89)                     | 5.735    | 2         | .029*                 | 3.31             |
|              | Confronting | 34.33(7.02)                    | 30.00(2.65)                     | 0.79     | 2         | 0.512                 | 0.456            |
| Nondirective | Releasing   | 20.67(10.69)                   | 26.00(8.72)                     | -0.828   | 2         | 0.495                 | -0.478           |
|              | Exploring   | 26.67(4.16)                    | 29.67(3.21)                     | -3       | 2         | .095^                 | -1.73            |
|              | Supporting  | 26.67(2.08)                    | 31.00(2.65)                     | -13      | 2         | .006**                | -7.51            |

Note. This table presents the shift in coach self-perceptions across the six behavioral dimensions of the CBQ.  $n = 3$ . CBQ = Coaching Behavior Questionnaire; *M* = Mean; *SD* = Standard Deviation; *t* = *t*-statistic; *df* = degrees of freedom; *p* = probability value. \*Significant at the .05 level. \*\*Significant at the .01 level.

Regarding RQ1, the null hypothesis, which stated there would be no statistically significant difference in coaching behavior categories—was rejected. The alternative hypothesis was supported, as the implementation of the communication training program resulted in significant shifts in both directive (Informing) and nondirective (Supporting) coaching behaviors.

Regarding RQ2, paired-samples *t*-tests revealed statistically significant increases across every tactical performance category, yielding large effect sizes (Table 2). Total GPAI scores increased from pre-season ( $M =$

66.50,  $SD = 7.38$ ) to post-season ( $M = 94.80$ ,  $SD = 3.79$ ),  $t(9) = -10.30$ ,  $p < .001$ ,  $d = -3.26$ . Thus, the null hypothesis was rejected, confirming a statistically significant difference in player tactical performance metrics between the two assessment intervals. The magnitude of the increase was substantial across all categories, particularly within Teamwork,  $t(9) = -10.16$ ,  $p < .001$ ,  $d = -3.21$ , and Passing,  $t(9) = -9.68$ ,  $p < .001$ ,  $d = -3.06$ .

**Table 2.** Paired Samples T-Test Results for Game Performance Assessment Instrument (GPAI) Metrics.

| Metric     | Pretest $M(SD)$ | Posttest $M(SD)$ | $t$    | $df$ | $p$ (two-tailed) | Cohen's $d$ |
|------------|-----------------|------------------|--------|------|------------------|-------------|
| Teamwork   | 12.40(2.37)     | 20.00(0.00)      | -10.16 | 9    | <.001            | -3.21       |
| Position   | 13.60(1.26)     | 18.80(1.93)      | -6.5   | 9    | <.001            | -2.06       |
| Trapping   | 13.60(1.90)     | 19.20(1.69)      | -6.24  | 9    | <.001            | -1.97       |
| Dribbling  | 13.60(1.26)     | 17.20(1.93)      | -4.32  | 9    | 0.002            | -1.37       |
| Passing    | 13.30(1.70)     | 19.60(1.26)      | -9.68  | 9    | <.001            | -3.06       |
| Total GPAI | 66.50(7.38)     | 94.80(3.79)      | -10.3  | 9    | <.001            | -3.26       |

Note. This table illustrates changes in player tactical performance metrics between pre-season (September) and post-intervention (December).  $n = 10$ . GPAI = Game Performance Assessment Instrument;  $M$  = Mean;  $SD$  = Standard Deviation;  $t$  = t-statistic;  $df$  = degrees of freedom;  $p$  = probability value;  $d$  = Cohen's  $d$  effect size. \*Significant at the .05 level. \*\*Significant at the .01 level.

To address RQ3, an independent variable consisted of the four Littauer (1992) temperament categories: Sanguine, Choleric, Melancholy, and Phlegmatic (Table 3). The dependent variable was the post-intervention Total GPAI score, and the covariate was the pre-intervention Total GPAI score.

**Table 3.** Descriptive Statistics for Post-Intervention Total GPAI by Temperament.

| Temperament | $n$ | $M$   | $SD$ |
|-------------|-----|-------|------|
| Sanguine    | 1   | 88    | —    |
| Choleric    | 3   | 97.33 | 2.31 |
| Melancholy  | 3   | 96    | 4    |
| Phlegmatic  | 2   | 92    | 0    |
| Total       | 9   | 94.67 | 4    |

Note. This table presents the mean and standard deviation of total GPAI scores following the nine-month intervention, categorized by player temperaments identified via the LPP.  $n = 9$ . LPP = Littauer Personality Plus test; GPAI = Game Performance Assessment Instrument;  $M$  = Mean;  $SD$  = Standard Deviation.

Preliminary checks were conducted to ensure that the data met the assumptions required for an ANCOVA. Levene's test of equality of error variances was non-significant,  $F(3, 4) = 3.80$ ,  $p = .092$ , indicating that the assumption of homogeneity of variance was not violated. After adjusting for pre-intervention performance, the main effect of player temperament on post-assessment tactical scores was not statistically significant,  $F(3, 4) = 4.63$ ,  $p = .086$ , partial  $\eta_p^2 = .776$ , though it demonstrated a large effect size (Table 4). The covariate, pre-intervention performance, did not significantly predict post-assessment performance in this model,  $F(1, 4) = 2.04$ ,  $p = .226$ , partial  $\eta_p^2 = .338$ . Consequently, the null hypothesis was retained. Despite the lack of statistical significance due to the limited sample size ( $n = 9$ ), the temperament factor accounted for 77.6% of the post-assessment variance. This large effect size suggested that player temperament may share

a substantial practical relationship with variations in athlete tactical performance, warranting further investigation with a larger participant cohort.

**Table 4.** ANCOVA Results for Total GPAI Post-Intervention by Temperament.

| Source               | SS     | df | MS    | F    | p     | $\eta p^2$ |
|----------------------|--------|----|-------|------|-------|------------|
| Pre-GPAI (Covariate) | 14.41  | 1  | 14.41 | 2.04 | 0.226 | 0.338      |
| Temperament          | 98.14  | 3  | 32.71 | 4.63 | 0.086 | 0.776      |
| Error                | 28.25  | 4  | 7.06  |      |       |            |
| Corrected Total      | 128.00 | 8  |       |      |       |            |

*Note.* This table presents the results of a one-way ANCOVA examining the impact of player temperament on post-intervention tactical performance, using pre-intervention scores as a covariate.  $R^2 = .779$ , Adjusted  $R^2 = .559$ .  $n = 9$ . LPP = Littauer Personality Plus test; GPAI = Game Performance Assessment Instrument; SS = Sum of Squares;  $df$  = degrees of freedom; MS = Mean Square;  $F$  =  $F$ -statistic;  $p$  = probability value;  $\eta p^2$  = partial eta squared. \*Significant at the .05 level.

## Discussion

This study was designed to address a problem in US college sports: the reliance on intuition rather than intention in coaching (Roberts et al., 2020; Sheldon, 2018) and communication (Mavor et al., 2010). Ineffective communication can increase student-athletes' cognitive load and limit their development (Bates & McShan, 2025). By providing and examining a communication training curriculum, this study attempted to bridge the gap between the coach's intent and on-field execution, a directed telescope (Van Creveld, 1979) approach. The findings offer a longitudinal blueprint for how intentional and deliberate communication serves as the principal driver behind both athletic performance and development.

The problem identified in this study was the gap between a coach's instructions and player execution on the pitch. The results demonstrate that by replacing an intuitive approach to communication with an intentional framework, coaches can bridge this divide. The statistically significant differences in both coaching behaviors as measured by the Coaching Behavior Questionnaire (CBQ) directly corresponded to improvements in all Game Performance Assessment Instrument (GPAI) categories. This validated the study's primary purpose, proving that communication training can move beyond interpersonal "soft skills" to become a rigorous tool for tactical development.

The study identified that intuitive coaching often leads to an over-reliance on directive "data-dumping," which increases cognitive load. The Informing category of the CBQ—representing directive tactical instruction—showed a significant decrease and a massive effect size ( $d = 3.31$ ). This shift suggests that coaches became more intentional and concise in their delivery. This behavioral change provided the clarity needed for a concurrent and massive shift in player Position/Direction on the GPAI ( $d = -2.06$ ). When coaches removed the "noise" of intuitive, excessive informing, athletes were better able to execute specific tactical positioning.

An integral part of the intervention was the Emotional Lane training, which affirmed players' feelings and developed a sense of trust. These purposeful actions are evident in the statistically significant increase in Supporting scores on the CBQ ( $p = .006$ ,  $d = -7.51$ ). This relational intentionality might even be employed as a direct mediator in on-field situations and is supported by observations of GPAI Teamwork and Supporting Behavior, which earned the highest posttest score ( $M=20.00$ ). These findings suggest that when coaches deliberately validate their players' emotions through the "Emotional Lane," they create a clear path towards collaborative behaviors necessary for elite team cohesion and performance (Li et al., 2024).

The statistically significant improvements in technical execution categories—specifically Passing ( $p < .001$ ) and Dribbling ( $p = .002$ )—provide empirical evidence of Cognitive Load Theory (Sweller, 1988, 1994) and Dual-Processing Theory (Kahneman, 2011) in action. CLT states that working memory has limited capacity, and instructional design must minimize "extraneous cognitive load" the mental effort spent processing poorly delivered or disorganized information to allow cognitive resources to be dedicated to "germane load," which facilitates actual learning and task execution (Sweller, 1988, 1994).

Intuitive coaching behaviors can strain student-athletes' cognitive load (Bates & McShan, 2025). The higher utilization of the "Informing" category by the coaches (as demonstrated by baseline CBQ scores) has the potential to lead to working memory overload from extraneous information received. By implementing the "Three Lanes" and "Narrative" communication components, coaches can now streamline the dissemination of information. By reducing irrelevant information, more cognitive bandwidth became available to the student-athletes, as evidenced by the statistically significant increase in Total GPAI scores (66.50 to 94.80).

The increase in the Total GPAI score can be further explained by the shift from System 1 to System 2 thinking (22).

**System 1 Thinking:** This thinking type represents quick, instinctual, and often emotional processing, which is exemplified in traditional coaching as the "Why" trap (e.g., "Why did you miss that pass?"). Accusatory directives can also trigger a defensive System 1 response, characterized by emotional reactivity and a "shutting down" of analytical capabilities (Kahneman, 2011). This response can create mental friction, as the athlete's brain prioritizes psychological safety over tactical analysis.

**System 2 Thinking:** This thinking type represents a more rational, slower, and more deliberative approach. The "Deep Inquiry" utilized in Training 3 was specifically designed to bypass the defensive System 1 trigger and engage the athlete's rational faculties (Kahneman, 2011; Stanovich & West, 2000).

The intervention likely created a psychologically safe environment where players could activate their logical, System 2 resources and apply them to solving tactical on-field challenges. This transition is reflected in the Passing and Dribbling GPAI scores, which require both technical skill and rapid analytical decision-making. The intentional shift in coaching behavior—from directive (System 1 triggers) to nondirective (System 2 engagement)—effectively reduced the internal "noise" for the athletes, enabling the significant tactical gains measured during the 2025 season.

Rather than treating student-athletes as "cogs" in a tactical system—a common pitfall in high-stakes collegiate athletics—coaches treated them as individuals to be persuaded. According to Social Influence Theory, persuasion is most effective when messages are "anchored" in the recipient's existing beliefs and values (Cialdini, 2021). Using "Casing, Observing, and Profiling" (the COP model), the coaches aligned their tactical directives with the athletes' internal narratives. This alignment ensured that directives issued in high-pressure match scenarios were met with lower psychological resistance and greater cognitive buy-in.

This intentionality laid the foundation for Relational Trust. According to literature on sport psychology, Relational Trust is considered necessary for high-speed adaptivity (Dirks, 2000). Self-determination and autonomy would be enhanced in athletes who believe their personal temperament and "egocentric anchors" are acknowledged and appreciated. (Deci & Ryan, 2000).

This study fills a clear gap in existing literature by linking communication-focused training to objective performance measures. It provides athletic departments with a rigorous framework to improve both instructional efficiency and player outcomes through intentionality.

From these findings, sports management programs may benefit from introducing "Psychological Persuasion" and "Active Inquiry" (Looping) techniques early in their respective programs. Coaches who can effectively implement the concepts embedded in these modules will be better equipped to manage the cognitive load placed on their athletes, leading to better tactical outcomes.

Although the ANCOVA did not reach statistical significance ( $p = .086$ ), the very large effect size ( $\eta p^2 = .776$ ) suggests that player temperament (LPP) explains a substantial proportion of the variance in athletes' responses to coaching communication.

The results here suggest that the "Skeleton Model" (Practical, Emotional & Social lanes) is versatile and may be applicable for a variety of athlete personality types. Future research with larger samples is required to define the relationships between temperament and performance and to determine how best to apply the model to different sports environments.

### ***Future Directions***

Future research with larger, more diverse participant cohorts is required to further define the relationships between player temperament and performance outcomes. Separate longitudinal studies should investigate the long-term retention of these communication shifts and their applicability across different sports environments beyond collegiate soccer.

## **Conclusion**

In conclusion, this study demonstrates that shifting from intuitive to intentional coaching communication significantly enhances both the efficiency of communication instruction and athletic execution. The use of an intentional communication curriculum, driven by both Cognitive Load Theory (Sweller, 1988, 1994; Kahneman, 2011) and Persuasion (23), delivered to the coaching staff suggests that it has eliminated many of the extraneous mental demands on student-athletes and made the translation of coaching directives into action on the pitch seamless. The statistically significant differences across all the GPAI metrics and the noticeable variations in the CBQ suggest that the "Skeletal Model" provides a framework for communication training in collegiate athletics. The statistically significant differences across all the GPAI metrics and the noticeable variations in the CBQ suggest that the "Skeletal Model" provides a framework for communication training in collegiate athletics. While a player's temperament remains a factor in how humans process information, the positive results of this study suggest that intentionality is an important, trainable leadership skill for sport professionals to maximize performance in high-pressure situations.

## **Practical Applications**

Coaches can utilize "Deep Inquiry" and "Looping" techniques to move players from emotional/defensive reactions to rational, analytical thinking during high-pressure scenarios. The Three Lanes Concept" (Practical, Emotional, and Social) can be used to ensure tactical instructions are balanced with emotional validation and team belonging. Coaches can reduce the volume of directive "data-dumping" (Informing) to free up players' cognitive bandwidth for technical execution and in-game decision-making. The application of the "COP" Model (Case, Observe, Profile) to align tactical instructions with individual player temperaments to increase buy-in

**Conflict of interests:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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