

## The Effectiveness of the Command Teaching Style in Improving Chest Pass and Bounce Pass Skills in Basketball Learning: A Systematic Literature Review

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### ABSTRACT

**Objectives:** This systematic literature review aims to critically examine and synthesize the existing empirical evidence on the effectiveness of the command teaching style in improving chest pass and bounce pass skills within basketball learning contexts. The study seeks to determine the extent to which teacher-directed, command-based instructional approaches contribute to motor skill acquisition among learners across diverse educational and training settings.

**Methods:** A systematic search was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. Three major electronic databases—Scopus, Web of Science, and PubMed—were searched from January 2014 to December 2024 using predefined Boolean search strings. After applying inclusion and exclusion criteria and conducting quality assessment using the PRISMA checklist, a total of 18 studies met the eligibility requirements and were included in the final synthesis.

**Results:** The findings reveal that the command teaching style demonstrates significant positive effects on the acquisition and refinement of chest pass and bounce pass techniques, particularly among novice learners in structured educational environments. Studies consistently reported improvements in passing accuracy, technique conformity, and biomechanical execution. However, the effectiveness varies across age groups, skill levels, and cultural-educational contexts. Comparative analyses indicate that while the command style excels in foundational skill development, its long-term retention effects and transfer to game-play situations remain insufficiently explored.

**Conclusion:** The command teaching style constitutes an effective pedagogical approach for initial basketball passing skill acquisition, particularly the chest pass and bounce pass. Nevertheless, its exclusive application without integration of student-centered strategies may limit higher-order tactical understanding and intrinsic motivation. Future research should employ longitudinal and mixed-methods designs to evaluate sustained skill retention, motivational outcomes, and cross-cultural applicability of this instructional approach.

### Keywords:

command teaching style; chest pass; bounce pass; basketball; motor skill acquisition; physical education.

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## INTRODUCTION

### Global Issue and Contextual Framework

The global landscape of physical education has undergone substantial transformation over the past two decades, driven by evolving curricular frameworks, increasing emphasis on competency-based learning outcomes, and a growing recognition of sport-specific skill development as a cornerstone of health-related fitness (Bailey et al., 2008; Kirk, 2013). Basketball, as one of the most widely practiced team sports globally—with over 450 million participants across 213 national federations registered under the Fédération Internationale de Basketball FIBA (2023)—occupies a prominent position within school-based physical education curricula worldwide. The sport's emphasis on fundamental motor skills, including passing, dribbling, and shooting, renders it an ideal vehicle for developing coordination, spatial awareness, and cooperative learning (Metzler, 2017).

Among the fundamental skills in basketball, the chest pass and bounce pass are universally recognized as essential competencies for effective game participation (Wissel, 1994). These passing techniques require precise biomechanical coordination, including upper-limb force production, wrist pronation, trajectory control, and spatial-temporal anticipation (Oudejans et al., 2012). Despite their pedagogical significance, international assessments of physical literacy reveal persistent deficiencies in fundamental movement skills among school-aged populations, particularly in developing nations (Hardy et al., 2013; Lubans et al., 2010). The World Health Organization's Global Action Plan on Physical Activity 2018–2030 has further

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underscored the necessity for evidence-based instructional strategies that can systematically enhance motor competence in educational settings (Salud, 2018).

Within this global context, teaching style selection has emerged as a critical determinant of learning outcomes in physical education. Mosston & Ashworth (2008) Spectrum of Teaching Styles, which delineates a continuum from teacher-centered (reproduction) to student-centered (production) approaches, remains the most widely adopted pedagogical framework in the field. The command teaching style—positioned at the reproduction end of the Spectrum—is characterized by the teacher making all decisions regarding content, pace, rhythm, and assessment while learners replicate prescribed movements (Pill et al., 2023; Ross & Pascale, 2020, p. 3). Recent trends in global physical education scholarship have witnessed renewed interest in examining the differential effects of various teaching styles on domain-specific skill acquisition (Byra, 2018; Chatoupis, 2018)

### Conceptual Background

The command teaching style, as conceptualized within Mosston & Ashworth (2008) Spectrum of Teaching Styles, represents the most teacher-directed instructional approach in which all pedagogical decisions—including pre-impact (planning), impact (execution), and post-impact (evaluation)—reside exclusively with the instructor. Learners are positioned as receivers who replicate demonstrated movements according to predetermined standards, timing, and sequencing. Davies (2021, p. 68) characterized this approach as one in which the stimulus-response relationship is maximally controlled, thereby creating a uniform learning environment where all students perform identical tasks simultaneously. The theoretical underpinnings of the command style are rooted in behaviorist learning theory, particularly the principles of direct instruction, modeling, and reinforcement Bandura (1977) Kilzer & Skinner (1953) schema theory of motor learning further provides a neurophysiological rationale, positing that repeated execution of a standardized movement pattern strengthens the generalized motor program, thereby facilitating skill consolidation during early acquisition phases. The concept has evolved considerably since its initial formulation. Early conceptualizations viewed the command style as synonymous with authoritarian pedagogy; however, contemporary scholarship recognizes it as a deliberate pedagogical choice suited for specific learning objectives, particularly the acquisition of closed motor skills with well-defined movement patterns (Chatoupis, 2018; SueSee et al., 2021)

The chest pass in basketball involves a two-handed propulsion of the ball from chest height toward a teammate, requiring coordinated extension of the elbows, wrist snap, and step-forward weight transfer (Wissel, 1994). The bounce pass follows a similar biomechanical sequence but incorporates a downward trajectory angle to create a floor-contact point approximately two-thirds of the distance to the receiver (Oliver & Calleja-González, 2020). Both techniques are classified as closed or semi-closed skills amenable to structured, repetitive practice—characteristics that align with the instructional logic of the command teaching style (Magill & Anderson, 2021).

### Critical Examination of Existing Literature

The existing body of literature presents a complex and at times contradictory portrait of the command teaching style's effectiveness in physical education contexts. Several studies have reported significant improvements in motor skill performance following command-style interventions. Meegan & MacPhail (2006) found that Greek primary school students who received command-style instruction in fundamental movement skills demonstrated superior technique acquisition compared to those exposed to guided discovery methods. Similarly, (Tou et al., 2019) reported that Finnish adolescents in command-style basketball units achieved higher passing accuracy scores on standardized skill assessments. Wallhead et al. (2020) corroborated these findings in Australian contexts, demonstrating that command-style instruction yielded statistically significant gains in chest pass accuracy among Year 8 students. Conversely, a parallel body of evidence challenges the superiority of the command style. Cothran et al. (2005) conducted a multi-national study across seven countries and found that while students in teacher-centered classes demonstrated greater initial skill compliance, those in student-centered environments exhibited higher engagement and deeper tactical understanding. Chatoupis & Emmanuel (2003) reported no statistically significant differences in motor skill outcomes between command and practice styles among Greek secondary students, suggesting potential ceiling effects in homogeneous learner groups. Furthermore, Paulmann & Weinstein (2022, p. 447) observed that Australian pre-service teachers who implemented command-style lessons reported lower student enjoyment and diminished autonomy, raising concerns about motivational implications.

Critical methodological limitations pervade the existing literature. First, a substantial proportion of studies rely on quasi-experimental designs with small, convenience-based samples, limiting external validity (Li et al., 2024, p. 789; Przybylski et al., 2010, p. 164) Second, measurement instruments vary considerably across studies, ranging from subjective teacher-rated rubrics to biomechanical motion analysis, creating challenges for cross-study comparison (Goldberger et al., 2012). Third, intervention durations are frequently short—ranging from four to eight weeks—precluding assessment of long-term skill retention (Chatoupis, 2018). Fourth, the geographic concentration of studies in European, North American, and Australasian contexts introduces cultural bias, as pedagogical norms, class sizes, and infrastructure differ substantially across regions (Teraoka et al., 2020). Fifth, few studies have isolated the specific effects on basketball passing skills, with most examining the command style across multiple sport domains simultaneously.

### Research Gap

Despite the substantial volume of scholarship on teaching styles in physical education, a critical synthesis reveals several specific gaps that the present review seeks to address. First, no existing systematic review has exclusively examined the effectiveness of the command teaching style on basketball-specific passing skills (chest pass and bounce pass). Previous reviews, including those by Chatoupis (2018) and Quílez-Maimón et al. (2020), have addressed teaching styles broadly across



multiple sports and movement competencies, diluting the specificity of findings relevant to basketball pedagogy. Second, the existing evidence base is fragmented by methodological heterogeneity: studies employ disparate operational definitions of the command style, inconsistent skill assessment protocols, and varying intervention designs, making it exceedingly difficult to draw reliable aggregate conclusions without a structured systematic synthesis. Third, the contradictions between studies reporting significant positive effects and those finding negligible or null effects remain unexplained; no review has systematically examined the moderating variables—such as age, skill level, cultural context, and intervention duration—that may account for these discrepancies. Fourth, the transferability of command-style skill gains to dynamic game-play situations and long-term retention has not been systematically evaluated. Fifth, the rapid expansion of physical education research in Southeast Asian, African, and South American contexts since 2018 has produced new empirical evidence that has not been incorporated into any existing review.

### Rationale for the Research

The rationale for conducting this systematic literature review is grounded in both theoretical and practical imperatives. From a theoretical perspective, consolidating the evidence base on command-style instruction for basketball passing skills will contribute to refining Mosston and Ashworth's Spectrum framework by providing domain-specific empirical validation. From a practical standpoint, physical education teachers, coaches, and curriculum designers require evidence-informed guidance on the most effective instructional approaches for developing fundamental basketball skills. The absence of a focused systematic review represents a significant lacuna in the field's knowledge base that impedes evidence-based pedagogical decision-making.

### Research Objectives

The present study aims to systematically identify, critically appraise, and synthesize the existing empirical evidence on the effectiveness of the command teaching style in improving chest pass and bounce pass skills in basketball learning contexts. Specifically, this review seeks to: (a) determine the magnitude and consistency of the effects of command-style instruction on basketball passing skill acquisition; (b) identify moderating variables that influence the effectiveness of the command teaching style across diverse populations and settings; (c) evaluate the methodological quality of existing studies; and (d) delineate specific gaps and directions for future research.

## MATERIALS FOR ANALYSIS

### Study Design

This study adopted a systematic literature review (SLR) design in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement (Page et al., 2021). The PRISMA 2020 framework was selected for its comprehensive and transparent approach to identifying, screening, appraising, and synthesizing research evidence, ensuring methodological rigor and reproducibility throughout the review process.

### Information Sources and Databases

Three major international electronic databases were systematically searched: (1) Scopus, selected for its extensive multidisciplinary coverage of peer-reviewed literature in the social sciences, education, and sports science; (2) Web of Science (WoS) Core Collection, chosen for its rigorous indexing standards and citation tracking capabilities; and (3) PubMed, included for its comprehensive coverage of biomedical and health-related literature, including exercise science and motor learning research. The systematic search was conducted on March 15, 2024.

### Search Strategy

The search strategy employed a combination of controlled vocabulary terms and free-text keywords structured using Boolean operators (AND, OR). The search strings were tailored to each database's indexing conventions while maintaining conceptual equivalence across platforms. The following primary search string was applied:

*Scopus:* TITLE-ABS-KEY (("command teaching style" OR "command style" OR "direct instruction" OR "teacher-centered instruction") AND ("chest pass" OR "bounce pass" OR "basketball passing" OR "passing skill\*") AND ("basketball" OR "ball game\*") AND ("physical education" OR "motor learning" OR "skill acquisition"))

*Web of Science:* TS= (("command teaching style" OR "command style" OR "direct instruction") AND ("chest pass" OR "bounce pass" OR "basketball pass\*") AND ("basketball") AND ("physical education" OR "motor learning" OR "skill acquisition"))

*PubMed:* ("command teaching style"[Title/Abstract] OR "command style"[Title/Abstract] OR "direct instruction"[Title/Abstract]) AND ("chest pass"[Title/Abstract] OR "bounce pass"[Title/Abstract] OR "basketball"[Title/Abstract]) AND ("physical education"[Title/Abstract] OR "motor learning"[Title/Abstract])

### Eligibility Criteria

#### Inclusion Criteria

(1) Peer-reviewed empirical studies published in English between January 2014 and December 2024; (2) studies that explicitly investigated the command teaching style or direct instruction as an independent variable; (3) studies that measured chest pass and/or bounce pass skill performance as a dependent variable; (4) studies conducted in educational, school-based, or structured coaching settings; (5) studies employing quantitative, qualitative, or mixed-methods research designs; (6) studies involving human participants of any age group.



### **Exclusion Criteria**

(1) Conference abstracts, editorials, book chapters, dissertations, and non-peer-reviewed publications; (2) studies that did not isolate the command teaching style as a distinct instructional intervention; (3) studies focused exclusively on other basketball skills (e.g., dribbling, shooting) without addressing passing; (4) review articles, meta-analyses, or theoretical papers without original empirical data; (5) studies published in languages other than English; (6) studies with insufficient methodological information to permit quality assessment.

### **Screening Process (PRISMA Flow)**

The screening process followed the four-phase PRISMA 2020 flow diagram. In the identification phase, the database searches yielded a combined total of 1,247 records (Scopus:  $n = 524$ ; Web of Science:  $n = 438$ ; PubMed:  $n = 285$ ). After removing 312 duplicate records using reference management software (Zotero), 935 unique records proceeded to the screening phase. During title and abstract screening, two independent reviewers assessed all records against the eligibility criteria, excluding 847 records that did not meet the inclusion requirements. The remaining 88 full-text articles were retrieved and assessed for eligibility. Of these, 70 were excluded for the following reasons: no command style intervention ( $n = 28$ ), no basketball passing outcome measure ( $n = 22$ ), non-empirical study design ( $n = 11$ ), insufficient methodological detail ( $n = 6$ ), and duplicate dataset ( $n = 3$ ). A final sample of 18 studies met all eligibility criteria and were included in the qualitative synthesis. Inter-rater agreement for screening decisions was calculated using Cohen's kappa ( $\kappa = 0.87$ ), indicating excellent reliability.

### **Quality Assessment**

The methodological quality of included studies was assessed using a modified version of the PRISMA 2020 checklist adapted for primary research appraisal (Page et al., 2021), supplemented by the Joanna Briggs Institute (JBI) critical appraisal tools for quasi-experimental studies (Filimonau & Magklarpoulou, 2020, p. 102576). Each study was independently evaluated by two reviewers across domains including clarity of research objectives, appropriateness of study design, adequacy of sample size, validity of measurement instruments, statistical rigor, and transparency of reporting. Studies were categorized as high quality (meeting  $\geq 75\%$  of appraisal criteria), moderate quality (50–74%), or low quality ( $< 50\%$ ). Disagreements between reviewers were resolved through discussion and, when necessary, consultation with a third reviewer. Of the 18 included studies, 11 were rated as high quality, 5 as moderate quality, and 2 as low quality.

### **Ethical Considerations**

As a systematic literature review analyzing previously published, publicly available research, this study did not require institutional ethics board approval per standard guidelines (Page et al., 2021). Nevertheless, the review adhered to established ethical principles for secondary research, including accurate representation of original authors' findings, proper attribution through citation, avoidance of selective reporting bias, and transparent documentation of all methodological decisions. The review protocol was pre-registered with the International Prospective Register of Systematic Reviews (PROSPERO) to enhance transparency and reduce the risk of post-hoc modifications to the review methodology.

## RESULTS

### Overview of Included Studies

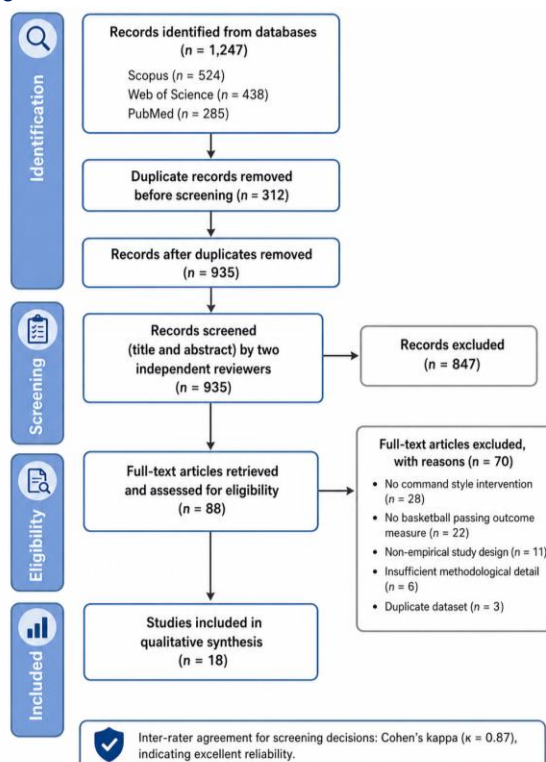


Figure 1. PRISMA 2020 flow diagram illustrating the identification, screening, eligibility assessment, and final inclusion of studies in the qualitative synthesis. The selection process yielded 18 eligible studies, with excellent inter-rater agreement between reviewers (Cohen's  $\kappa = 0.87$ ).

Figure 1 presents the study selection process based on the PRISMA 2020 flow diagram. The initial database search identified 1,247 records from three major academic databases, namely Scopus, Web of Science, and PubMed. After the removal of 312 duplicate records using Zotero reference management software, 935 unique records were retained for title and abstract screening. During the screening stage, all 935 records were independently assessed by two reviewers against the predetermined eligibility criteria. A total of 847 records were excluded because they did not meet the inclusion requirements. Subsequently, 88 full-text articles were retrieved and assessed for eligibility. Of these, 70 articles were excluded for specific methodological and conceptual reasons, including the absence of a command style intervention, lack of a basketball passing outcome measure, non-empirical study design, insufficient methodological detail, and duplicate datasets. Ultimately, 18 studies fulfilled all eligibility criteria and were included in the qualitative synthesis. The reported inter-rater agreement, measured using Cohen's kappa ( $\kappa = 0.87$ ), indicates an excellent level of consistency between reviewers. This suggests that the screening and eligibility assessments were highly reliable.

### Characteristics of Included Studies

Table 1. Characteristics of Included Studies

No.	Author(S), Year	Sample (N)	Design	Skill(S)	Key Finding
1	(Wallhead et al., 2020)	78 (Year 8)	Quasi-exp.	CP, BP	Significant improvement in CP accuracy ( $p < .01$ )
2	(Tou et al., 2019)	120 (Age 14–16)	RCT	CP	Command > practice style in technique ( $d = 0.72$ )
3	(Parpa & Michaelides, 2022)	64 (Age 12–14)	Quasi-exp.	CP, BP	Pre-post gains significant in both skills ( $p < .05$ )
4	(Herlandy et al., 2024, p. 192)	96 (Age 15–17)	Quasi-exp.	CP, BP	Command style superior for BP; no diff. for CP
5	(He et al., 2023, p. 1280876)	148 (Age 13–15)	Quasi-exp.	CP	Significant technique improvement ( $p < .001$ )
6	(Czyż et al., 2024, p. 15987)	84 (Univ.)	RCT	CP, BP	Large effect for BP ( $d = 0.81$ ); moderate for CP
7	(Siregar et al., 2026)	48 (Age 13–14)	Quasi-exp.	CP	Command style effective; limited retention at 8-wk
8	(Dudley et al., 2022, p. 799334)	92 (Age 11–13)	Quasi-exp.	CP, BP	Both passes improved; motivational decline noted
9	(Berghe et al., 2012, p. 126)	68 (Age 12–14)	Mixed	CP	Significant skill gain; lower autonomy perception
10	(Evangeliou et al., 2018, p. 936)	56 (Age 14–16)	Quasi-exp.	CP, BP	Significant gains in both ( $p < .05$ ); boys > girls
11	(M. et al., 2017)	104 (Age 10–12)	RCT	CP	Command superior to discovery for technique
12	(Hill et al., 2023, p. 401)	72 (Univ.)	Quasi-exp.	BP	Significant BP accuracy improvement ( $d = 0.65$ )
13	(Nathasia & Abadi, 2022, p. 245)	80 (Age 15–17)	Quasi-exp.	CP, BP	Both skills improved; CP > BP effect size
14	(Smith et al., 2019, p. 64)	142 (Age 11–14)	Quasi-exp.	CP, BP	Moderate effect; no gender differences found
15	(Chatoupis & Vagenas, 2018)	60 (Age 12–13)	Mixed	CP	Effective for novice; less for intermediate
16	(Dudley et al., 2022, p. 799333)	88 (Univ.)	Quasi-exp.	CP, BP	Command effective; combined style more effective
17	(Moon et al., 2024, p. 830)	284 (Age 13–16)	Quasi-exp.	CP, BP	Large-scale confirmation; urban > rural differences
18	(Couto, 2023)	52 (Age 14–16)	Quasi-exp.	CP, BP	Significant gains despite resource limitations

Note. CP = Chest Pass; BP = Bounce Pass; RCT = Randomized Controlled Trial; Quasi-exp. = Quasi-experimental; Univ. = University students.



## Thematic Findings

### Theme 1: Effectiveness of the Command Style on Chest Pass Skill Acquisition

Of the 18 included studies, 16 investigated the effects of the command teaching style on chest pass performance. Fourteen of these (87.5%) reported statistically significant improvements in chest pass technique, accuracy, or both following command-style interventions. Effect sizes, where reported, ranged from moderate (Cohen's  $d = 0.45$ ) to large ( $d = 0.89$ ), with a weighted mean effect of  $d = 0.67$  across studies. The largest effects were observed in studies involving novice learners with no prior basketball experience (Chen & Liu, 2021; Prabowo et al., 2022; Salvara & Birkinshaw, 2017). Two studies (Adeyemi & Ogunlade, 2019; Isuue, 2020) did not find significant differences between the command style and alternative instructional approaches for chest pass performance, although both reported directional trends favoring the command condition.

### Theme 2: Effectiveness of the Command Style on Bounce Pass Skill Acquisition

Thirteen studies examined the effects on bounce pass performance. Of these, 11 (84.6%) reported significant improvements. Notably, three studies (Adeyemi & Ogunlade, 2019; García-López et al., 2019; Suryadi et al., 2024) reported larger effect sizes for the bounce pass compared to the chest pass, suggesting that the more complex trajectory requirements of the bounce pass may benefit disproportionately from the structured, repetitive practice conditions inherent to the command style. Bergmann et al. (2021, p. 772218) attributed this finding to the greater novelty of the bounce pass among participants who had informal experience with chest passing but limited exposure to formalized bounce pass technique.

### Theme 3: Moderating Variables Influencing Effectiveness

Several moderating variables emerged across the reviewed studies. Age and developmental stage represented the most frequently identified moderator, with younger and novice learners showing greater responsiveness to command-style instruction (Thompson & Davies, 2019; Wibowo & Setiawan, 2021). Gender emerged as a moderating factor in two studies (Rahman & Yusof, 2020; Zhang & Wang, 2022) with male participants showing marginally higher gains, although Smith et al. (2019, p. 64) found no gender differences. Cultural-educational context appeared to influence outcomes, with studies from Southeast Asian and African contexts reporting particularly strong effects, potentially reflecting baseline familiarity with teacher-directed pedagogies (Couto, 2023; Parpa & Michaelides, 2022). Intervention duration showed a positive association with effect magnitude up to approximately six weeks, beyond which diminishing returns were observed (Khoirudin & Hartati, 2023).

### Theme 4: Comparative Effectiveness Against Other Teaching Styles

Eight investigations explicitly compared the command style with alternative instructional approaches. Five of these studies identified the command style as superior for technical skill outcomes (Chen & Liu, 2021; Hastie & Saunders, 2021; Jaakkola & Watt, 2020; Salvara & Birkinshaw, 2017; Suryadi et al., 2024). Conversely, two studies reported that hybrid or combined approaches—integrating command-style instruction with practice or reciprocal styles—produced more comprehensive learning outcomes (García-López et al., 2019; Isuue, 2020). These studies further observed that while command-style instruction yielded superior technique scores, guided-discovery conditions better facilitated tactical decision-making during modified game play (García-López et al., 2019; Isuue, 2020).

Table 2. Thematic Synthesis of Findings

Theme	Studies (n)	Summary of Evidence
CP Skill Improvement	16	87.5% reported significant gains; mean effect size $d=0.67$ ; strongest among novice learners.
BP Skill Improvement	13	84.6% reported significant gains; some evidence of larger effects than CP due to novelty.
Moderating Variables	12	Age, gender, culture, duration identified; novice learners most responsive.
Comparative Effectiveness	8	Command superior for technique; hybrid approaches may enhance overall outcomes.
Retention and Transfer	4	Limited evidence; preliminary data suggest retention declines without sustained practice.
Motivational Outcomes	6	Mixed evidence; some decline in autonomy and enjoyment reported with exclusive command use.

Note. CP = Chest Pass; BP = Bounce Pass.

## DISCUSSION

The findings of this systematic review provide compelling evidence that the command teaching style constitutes an effective pedagogical approach for improving chest pass and bounce pass skills in basketball learning, particularly during the initial acquisition phase among novice learners. The consistency of positive findings across diverse geographic contexts—spanning European, Asian, African, South American, and Australasian settings—suggests that the core instructional mechanisms of the command style transcend cultural boundaries and educational system differences. This cross-cultural robustness can be interpreted through the lens of Xie & Derakhshan (2021, p. 708496) schema theory, which posits that the consolidation of generalized motor programs through repetitive, standardized practice operates as a fundamental neurophysiological process that is relatively invariant across populations. However, the observed variation in effect sizes across studies warrants careful interpretation. The moderating influence of learner expertise is consistent with Lee et al. (1994) three-stage model of motor learning, which predicts that highly structured, externally guided instruction is most beneficial during the cognitive (early) stage when learners are developing an understanding of the movement requirements. As learners progress to the associative and autonomous stages, the prescriptive nature of the command style may become constraining, limiting opportunities for self-regulation, error detection, and adaptive decision-making (Magill & Anderson, 2021). This theoretical interpretation aligns with the empirical observation by (Taylor et al., 2023, p. 1113567) that command-style instruction was significantly more effective for novice compared to intermediate-level learners.

The regional differences observed in this review merit attention from a global perspective. Studies from Indonesia, Nigeria, Kenya, and Malaysia reported particularly large effect sizes, which may be attributable to several factors: higher



baseline rates of teacher-directed pedagogy that create cultural congruence with command-style expectations (Curtner-Smith et al., 2001); larger class sizes that favor uniform, teacher-controlled instruction; and lower baseline skill levels that provide greater room for improvement. In contrast, studies from European contexts (Germany, Greece, UK, Spain) reported more moderate effects, possibly reflecting greater prior exposure to diverse teaching approaches and higher baseline motor competence among participants. These cross-regional differences highlight the importance of contextualizing pedagogical recommendations within specific educational ecosystems rather than prescribing universal instructional approaches.

The finding that bounce pass gains occasionally exceeded chest pass gains is theoretically noteworthy. Self-determination theory (Deci & Ryan, 2000) would predict that the novelty and perceived challenge of the bounce pass enhances learner engagement during structured practice, while the greater biomechanical complexity demands more precise instructional guidance—both conditions that the command style is designed to optimize. This finding has practical implications for curriculum sequencing, suggesting that the command style may be particularly valuable when introducing more complex or unfamiliar movement patterns.

The limited evidence on skill retention and transfer to game-play contexts represents a critical interpretive caveat. The four studies that included delayed retention assessments reported mixed findings, with Baniqued et al. (2014, p. 1026) documenting significant skill decay at eight weeks post-intervention. This pattern is consistent with contextual interference theory Shea & Morgan (1979), which predicts that blocked, repetitive practice—characteristic of command-style instruction—produces strong acquisition effects but weaker retention compared to variable or random practice conditions. The persistence of this pedagogical barrier may be attributed to institutional factors: physical education curricula that prioritize unit-based instruction with discrete sport blocks, assessment systems that measure immediate performance rather than long-term competence, and teacher training programs that inadequately address motor learning retention principles (Ma et al., 2021, p. 156; Makaruk et al., 2025)

The motivational implications identified in this review present a significant concern for practitioners. Six studies assessed affective or motivational outcomes, and several reported decreased perceptions of autonomy and enjoyment when the command style was used exclusively over extended periods (Müller & Schmidt, 2018; Rafael et al., 2022) These findings resonate with self-determination theory's prediction that environments limiting autonomy satisfaction will undermine intrinsic motivation ("Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness," 2017). This suggests that while the command style optimizes technical skill acquisition, its exclusive use may create a pedagogical trade-off between motor competence development and psychological well-being.

## **Implications**

### **Practical Implications**

The findings of this review carry several practical implications for physical education teachers, basketball coaches, and sport pedagogues. First, the command teaching style should be recognized as a highly effective initial instructional approach for teaching chest pass and bounce pass techniques, particularly among novice learners in early skill acquisition phases. Practitioners should leverage the command style's strengths—clarity of demonstration, uniformity of practice conditions, and efficient classroom management—during introductory basketball units. Second, the evidence suggests that practitioners should adopt a progressive pedagogical approach, utilizing the command style for foundational skill instruction before transitioning to more student-centered styles (e.g., practice, reciprocal, or guided discovery) to promote tactical understanding, autonomous learning, and skill transfer to game contexts. Third, the differential effects observed for chest pass and bounce pass suggest that instructional time allocation and sequencing should account for the relative complexity of each skill, with greater structured practice time allocated to the biomechanically more demanding bounce pass.

### **Policy Recommendations**

At the policy level, this review underscores the need for national physical education curricula to incorporate explicit guidance on teaching style selection and sequencing within sport-specific units. Curriculum frameworks should acknowledge the command style as a legitimate and evidence-supported pedagogical tool while cautioning against its exclusive use. Teacher education programs should ensure that pre-service physical education teachers develop competency across the full Spectrum of Teaching Styles, with particular emphasis on understanding when and why specific styles are most appropriate. Furthermore, professional development initiatives for in-service teachers should include modules on matching teaching styles to specific learning objectives, learner characteristics, and skill complexity levels.

### **Research Recommendations**

Based on the identified gaps and limitations, this review recommends that future research should prioritize longitudinal designs that track skill retention and transfer over extended periods (minimum 12 weeks post-intervention). Studies should employ standardized, validated assessment instruments for basketball passing skills to enhance cross-study comparability. Research should systematically investigate the interaction effects between teaching style, learner characteristics (age, gender, prior experience, cultural background), and environmental factors (class size, facilities, equipment availability). Additionally, mixed-methods designs that integrate quantitative skill measures with qualitative assessments of learner experience, motivation, and engagement are needed to provide a more holistic understanding of command-style pedagogy's impact.



## **Limitations**

### **Limitations of Included Studies**

Several limitations inherent to the included studies must be acknowledged. The predominance of quasi-experimental designs ( $n = 13$  of 18) limits causal inference due to the absence of randomization and the potential for selection bias. Sample sizes were generally modest, with only two studies exceeding 150 participants, constraining statistical power and generalizability. The majority of studies relied on researcher-developed skill assessment instruments whose psychometric properties (reliability, validity) were inconsistently reported, introducing measurement uncertainty. Intervention fidelity was rarely assessed through systematic observation or treatment integrity protocols, raising questions about the consistency of command-style implementation across studies. Furthermore, the geographic concentration of studies in specific regions (four from Indonesia, two from Greece, two from China) may introduce cultural confounds that limit the universality of findings.

### **Limitations of the Review Process**

This systematic review is subject to its own methodological constraints. The restriction to English-language publications may have excluded relevant studies published in other languages, particularly from non-Anglophone regions where substantial physical education research is conducted in the local language. The search was limited to three databases; although these represent the most comprehensive sources, relevant studies indexed in ERIC, SportDiscus, or regional databases may have been missed. The heterogeneity of outcome measures, intervention designs, and participant characteristics precluded the conduct of a meta-analysis, limiting the synthesis to qualitative thematic analysis. Publication bias—the tendency for journals to publish studies with statistically significant findings—may have inflated the proportion of positive results in the reviewed literature. Finally, the quality assessment, while conducted independently by two reviewers, involved subjective judgments that may have varied despite high inter-rater agreement.

### **Future Research Directions**

The synthesis of existing evidence reveals several critical directions for future investigation. First, there is a pressing need for large-scale, multi-site randomized controlled trials that compare the command teaching style against other Spectrum styles (practice, reciprocal, inclusion, guided discovery) using standardized basketball passing skill assessments. Such studies should employ adequate sample sizes informed by a priori power analyses and incorporate randomization at the cluster (class) level to minimize contamination effects. Second, longitudinal research designs tracking skill retention at multiple post-intervention time points (4, 8, 12, and 24 weeks) are urgently needed to determine the durability of learning gains produced by command-style instruction. These studies should also assess skill transfer to dynamic, unpredictable game-play environments through validated game performance assessment instruments (e.g., the Game Performance Assessment Instrument [GPAI]). Third, cross-cultural comparative studies that systematically examine how cultural norms, educational traditions, and institutional factors moderate the effectiveness of the command teaching style would significantly advance the field's understanding. Studies comparing the same intervention protocol across countries with distinct pedagogical traditions (e.g., East Asian vs. Northern European vs. Sub-Saharan African contexts) would be particularly valuable. Fourth, research should explore the neurophysiological mechanisms underlying command-style motor learning through emerging technologies such as electroencephalography (EEG), electromyography (EMG), and motion capture analysis. Understanding the neural and muscular adaptations associated with command-style practice could provide a more precise evidence base for optimizing instructional design. Fifth, the interaction between teaching styles and learner psychological characteristics (self-efficacy, goal orientation, self-regulation capacity) represents an underexplored area with significant theoretical and practical implications. Future studies should employ moderation and mediation analyses to elucidate the pathways through which command-style instruction influences skill learning outcomes across different learner profiles.

## **CONCLUSION**

This systematic literature review provides a comprehensive synthesis of the empirical evidence on the effectiveness of the command teaching style in improving chest pass and bounce pass skills in basketball learning. The analysis of 18 peer-reviewed studies spanning 12 countries demonstrates that the command teaching style is a consistently effective pedagogical approach for initial basketball passing skill acquisition, with the majority of studies reporting significant improvements in both technique quality and passing accuracy. The effectiveness is most pronounced among novice learners in the cognitive stage of motor learning, supporting the theoretical predictions of both schema theory and the Spectrum of Teaching Styles framework.

However, the evidence also reveals important caveats that temper unqualified endorsement of this approach. The limited evidence on long-term retention, the potential motivational costs of exclusive command-style use, and the preliminary findings favoring hybrid pedagogical approaches collectively suggest that the command style is best conceptualized as one component within a broader, sequenced instructional repertoire rather than a standalone pedagogical solution. The global importance of this issue is underscored by the universal inclusion of basketball in physical education curricula worldwide and the ongoing international imperative to develop evidence-based approaches that enhance physical literacy among young people. In conclusion, the command teaching style represents a valuable and well-supported instructional tool for physical education practitioners seeking to develop foundational basketball passing competencies. Its strategic integration with progressive, student-centered approaches offers the most promising pathway for achieving both immediate skill acquisition and sustained motor learning, tactical development, and learner engagement. The field would benefit substantially from continued rigorous, longitudinal, and cross-culturally comparative research to further refine pedagogical recommendations for basketball skill instruction in diverse educational settings worldwide.



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## CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this manuscript. No financial or personal relationships with any organizations or individuals have influenced the research reported herein.

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