Teaching Style and Arm Muscle Strength Effects on Shot Put Learning

Research examining how teaching methods and physical strength impact student performance in shot put athletics

The Problem

Low Performance

Students struggle with shot put technique and distance

Teaching Methods

Monotonous command-style instruction lacks variation

Physical Differences

Varying arm muscle strength affects student outcomes

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Two Teaching Approaches

Command Style

- Teacher-centered instruction
- Direct demonstration
- Step-by-step guidance
- Immediate correction

Reciprocal Style

- Peer-to-peer learning
- Student feedback system
- Collaborative observation
- Active participation

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Research Design

01

Field Experiment Method

2x2 factorial design with 22 middle school students

02

Variables Tested

Teaching style and arm muscle strength as independent factors

03

Performance Measurement

Shot put technique and distance as dependent variables

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Key Findings

1

Reciprocal Style Wins

More effective overall than command style

2

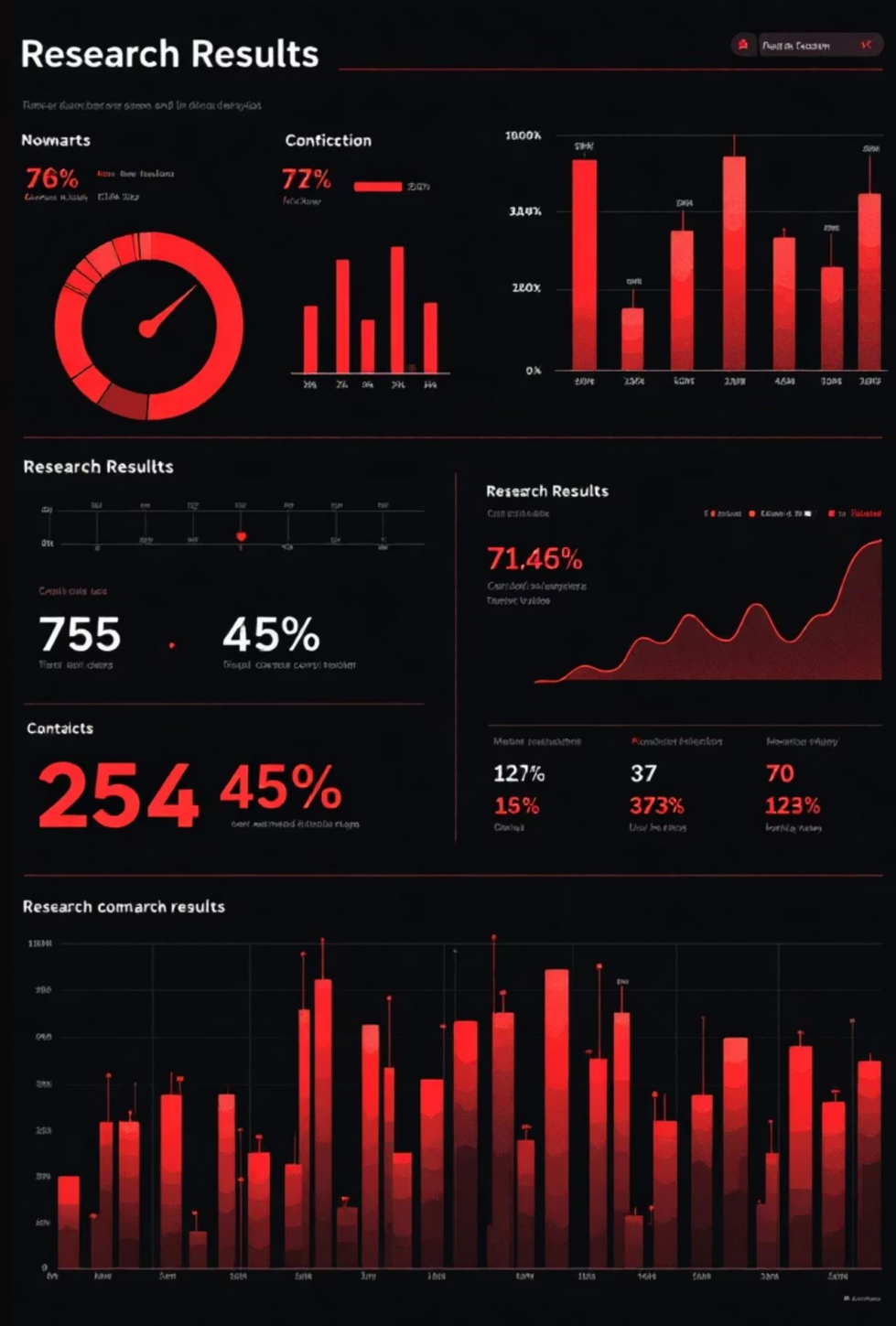
Interaction Effect

Teaching style effectiveness depends on muscle strength

3

Strength Matters

High strength students benefit more from reciprocal style



Practical Applications

High Arm Strength Students

Use reciprocal teaching for peer feedback and active learning

Low Arm Strength Students

Apply command style for direct instruction and technique focus

Adaptive Teaching

Match teaching method to student physical capabilities

Conclusion

> "Teaching effectiveness in shot put depends on matching instructional style to student arm muscle strength"

- **Reciprocal style generally more effective**
- **Command style better for weaker students**
- **Adaptive teaching maximizes learning outcomes**