



**How Taiwanese Children Peer Interaction and Learning Motivation Related to Motor Skill Performance:
The Mediating Role of Critical Thinking**

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Outline

1. Why study this topic
2. Methods
3. Results, Discussions, and Promotion

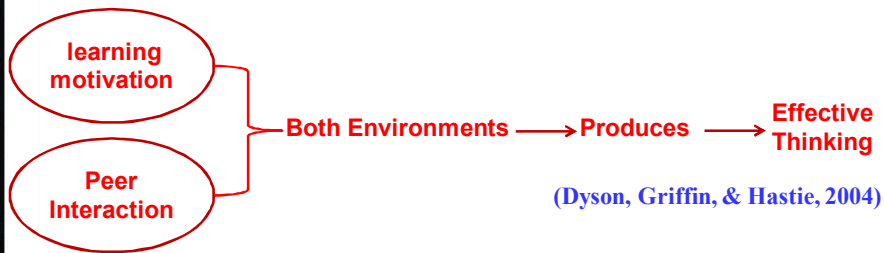




Why study this topic 1/5

- **Important Factor for Motor Skill Performance : Critical Thinking Skills Motivation, and Peer Interaction**

(Poolton, Masters, & Maxwell, 2006; Ripoll, Kerlirzin, Stein, & Reine, 1999)



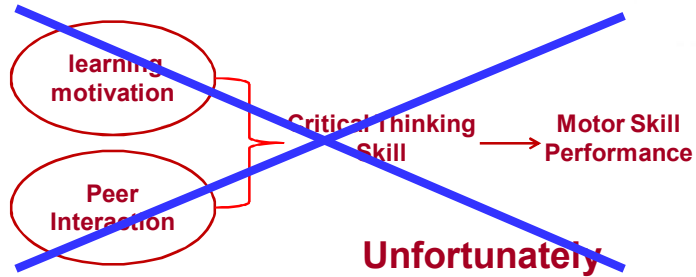
Why study this topic 2/5

When children are motivated to think about how to improve their motor skills simultaneous, which inspire their tendencies to learning motivation during thinking process





Why study this topic 3/5



The past 20 years of research literatures only have shown that peer interaction and learning motivation affect critical thinking, or affect motor skill...

(Rugutt & Chemosit, 2009; Singh & Singh, 1994; Tavani & Losh, 2003)



Why study this topic 4/5

Because: Critical thinking represents an important skill that contributes toward the success of movement tasks in a learning environment of peer interaction...

(McBride & Xiang, 2004).

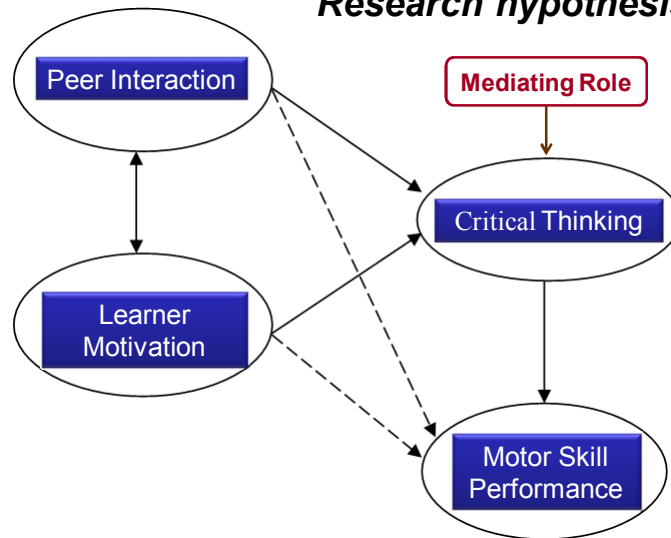
Because: the impact of motivational factors on successful critical thinking or motor skill performance has been recognized

(Small & Venkatesh, 2000; Xiang, McBride, Guan, & Melinda, 2003).



Why study this topic 5/5

Research hypothesis



Method

Participants 1/3



A total of 530 students : 264 boys, 266 girls } from 23 elementary schools
 mean age = 11.17±0.19 years

↓
 Representative of the largest school systems in the country within similar of key system variables such as student-teacher ratio, school finance, and enrollment status.

Method



Variables and Measures 2/3

1. Critical Thinking Skills in Sports Test: to test children's reflection and rational thinking, including five dimensions: assumption identification, induction, deduction, interpretation, and argument evaluation.
30 items of multiple choice questions.
2. Learning Motivation in Physical Education Scale: to designed based on curriculum-based learning motivation theory that generate a score for four types (attention, relevance, confidence, and satisfaction) of motivation.
16 items of 5-point scale
3. Peer Interaction Scale: is conceptualized as learner-perceived positive or negative student-to-student interactive behavior in a class setting. Two dimensions of peer interaction, the positive relationship and negative relationship.
18 items of 5-point scale
4. Motor Skill Test: three sport-related motor skills were tested including speed spot shooting, soccer shooting, and target throwing. These skill tests were chosen based on the accuracy-based test and total body movement test.

Method



Data Analysis 3/3

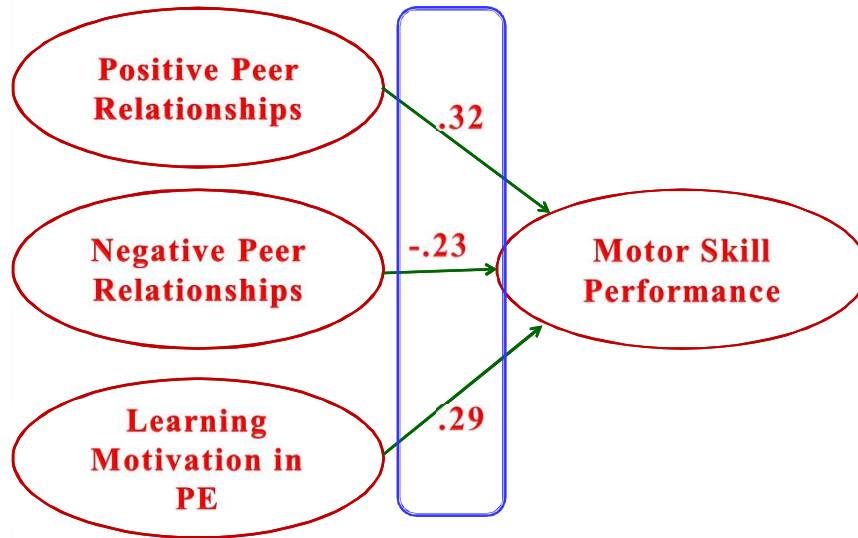
Data were analyzed using structural equation modeling. All analyses were carried out with the AMOS 16 software.

The causal steps and methods proposed by Baron and Kenny (1986) were conducted to examine the mediating effect of critical thinking between motivation, peer interaction, and motor skill performance.



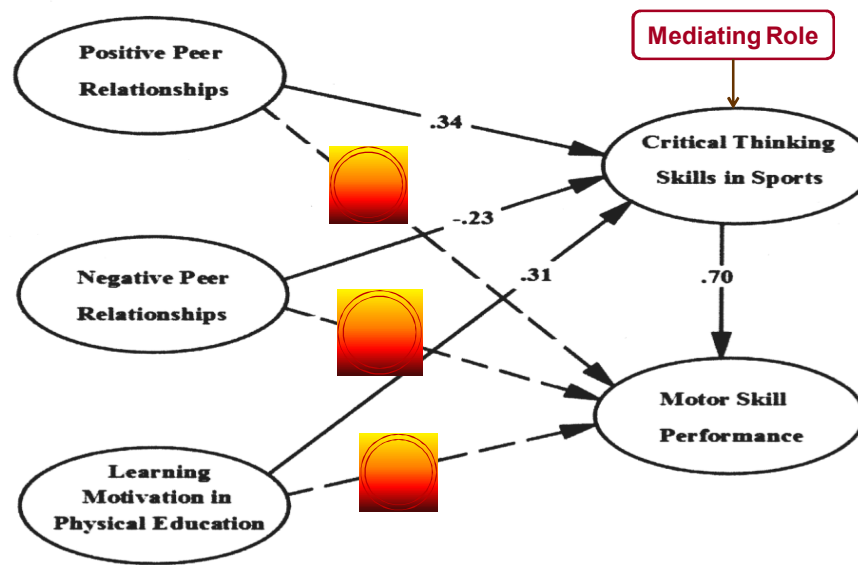
Results

Non add critical thinking skill as a mediating role



Results

Add critical thinking as a mediating role



Discussion




1. From the social development perspective of Vygotsky (1978), social interaction plays a central role in cognitive development. Additionally, cognitive activity is inspired by peer interaction and contributes to better performance
 2. A motivating learning environment where motor skills and movement problems are demonstrated can foster learners' ability for reflective thinking in physical education.
 3. However, critical thinking is suggested to play an influential role in psychomotor growth that mostly involve storing sensory and solving motor problems.
1. Motor skills are highly cognitive, the practice of critical thinking during the learning process can benefit movement performance.

Promote critical thinking skill integrated into learning during PE process in Taiwan (1/3)



SPORT PEDAGOGY


Promote critical thinking skill integrated into learning during PE process in Taiwan (2/3)



How In-service PE teacher teaching ...

SPORT PEDAGOGY

Promote critical thinking skill integrated into learning during PE process in Taiwan (3/3)



Practicum training for Pre-service PE teacher...



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for knowledge



Thanks for listening
Wish you happy everyday

