

# The Operational Performance of Physical Education in Primary Schools at Shanxi Province

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## Abstract

This research article aims to: 1) analyze the relationship between the dimensions of social interaction, absorptive capacity, cognitive trust, shared vision, and operational performance of physical education, and 2) examine whether a shared vision mediates the impact of social interaction, absorptive capacity, and cognitive trust on the operational performance of physical education. Data were collected from 387 core physical education teachers from 36 primary and junior high schools in Shanxi Province using a convenience sampling method. SPSS and SEM by AMOS were applied to analyze the collected data. The study found that: 1) Social interaction positively influences shared vision and absorptive capacity; cognitive trust positively influences shared vision; absorptive capacity positively influences shared vision; and shared vision positively influences the operational performance of physical education. 2) A shared vision mediates the relationship between social interaction, absorptive capacity, and cognitive trust and the operational performance of physical education.

**Keywords:** Absorptive Capacity; School Physical Education; Operational Performance; Shared Vision; Social Interaction

## Introduction

With the rapid development of education in China, physical education (PE) has become a vital component of comprehensive quality education. It aims to align with the modern needs of "facing modernization, facing the world, and facing the future," promoting innovation and progress in PE. In

response, the Chinese government has implemented policies emphasizing moral education, quality education, and fostering well-rounded development in students. Despite its recognized importance, PE often faces challenges in implementation, with curricula overshadowed by academic subjects. This has resulted in inadequate attention to the physical and mental health benefits of PE, highlighting the need for systemic reform.

Recent statistics underline the importance of physical activity in schools, demonstrating its positive impact on students' cognitive, emotional, and physical development. For instance, studies show that students engaged in regular physical activity perform better academically and socially. Yet, in primary and secondary schools, the allocation for PE remains insufficient.

To address these gaps, this study investigates the role of social interaction, absorptive capacity, cognitive trust, and shared vision in enhancing the operational performance of PE. The conceptual framework underscores these interrelationships and provides hypotheses for further exploration.

## **Research Objectives**

1. To analyze the relationship between the dimensions of social interaction, absorptive capacity, cognitive trust, shared vision and operational performances of physical education.

2. To analyze shared vision play mediating impact between social interaction, absorptive capacity, and cognitive trust on operational performances of physical education.

## **Research Hypothesis**

Hypothesis 1: Social interaction positively influences shared vision absorptive capacity;

Hypothesis 2: Cognitive trust positively influences shared vision

Hypothesis 3: Absorptive capacity positively influences shared vision

Hypothesis 4: Shared vision positively influences the operational performance of physical education.

Hypothesis 5: shared vision play a mediating impact between social interaction and operational performances of physical education

Hypothesis 6: shared vision play a mediating impact between cognitive trust and operational performances of physical education

Hypothesis 7: shared vision play a mediating impact between Absorptive capacity and operational performances of physical education

## Theories and Literature Reviews

This study is based on a theoretical study asfollow:

### Theoretical foundations

**1) Social network theory** Through literature combing, the existing theories about social network theory mainly include network structure view, network embedding theory, social network view based on social resources, etc. Network structure view. The network structure view emphasizes the structural features and interpersonal relationships formed by the association of action subjects, therefore, the scale, location and density of the network structure are the key points of the theory.

**2) Social Exchange Theory** Social exchange theory is a unique research theory based on different research findings, and is based on the psychology of "human behavior as a response to external stimuli". Social exchange is the interpersonal exchange of resources between people in social interaction in order to obtain favorable resources.

**3) Trust theory** Trust is a subjective response that is influenced by the situation. During the formation of the mechanism, as the situational stimulus changes, the individual's psychology and behavior also change, and the level of trust between the two parties changes in response to objective changes in the situation. Trust issues arise as a result of the interaction of different values and mindsets. Trust issues can be found everywhere in human social interaction.

**4) Social cognitive theory** The meso-pattern concept refers to the system of correlations, including self, others, events and roles, formed in an individual's cognition after selective processing of environmental information.

**5) Shared Vision Theory** Shared vision refers to a collective understanding and agreement on the organization's goals, purpose, and future direction. It creates a common framework that unites individuals, aligns their efforts, and fosters collaboration.

**6) Absorptive Capacity Theory** Absorptive capacity refers to an organization's ability to acquire, assimilate, transform, and apply new knowledge to improve decision-making, innovation, and overall performance.

## Related studies

1. Research on the impact of social capital on absorptive capacity In the process of improving the operational performance of physical education, schools are often dependent on their own ability and efficiency to aggregate resources, which is often supported by social capital, and the effective identification, integration and use of these aggregated non-material resources is a reflection of the absorptive capacity at the organizational level. This absorptive capacity is reflected in the effective identification, understanding and use of knowledge resources related to physical education in schools.

Effective social interaction within the school organization helps all teachers to be concerned about and identify with physical education. Su Liang based his research on schools. The development of football was studied and pointed out that allowing non-physical education in schools to participate in football in a variety of forms can help change their attitudes towards football and even other sports, which in turn can promote the development of physical education in schools.

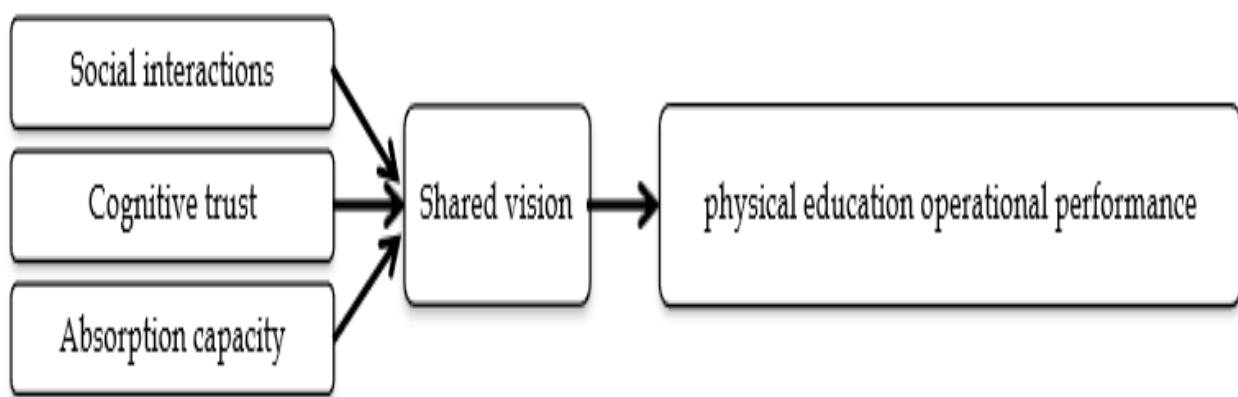
2. A study on the impact of absorptive capacity on the operational performance of physical education. In analyzing and addressing the question of how to improve the operational performance of physical education, social capital theory provides additional ideas and broadens the horizon. In the current development of school physical education, whether schools can further promote the process of physical education reform and improve the operational performance of physical education, as well as whether a more appropriate mediating variable can be found between multiple resource input and operational performance acquisition, has gradually become a difficult research point and an urgent breakthrough point for physical education practitioners. Accordingly, this paper investigates the mechanism of social capital influencing physical education based on the logical framework of non-profit organisations from operation to performance, using absorptive capacity as a mediating variable, and conducts a comprehensive study on the mechanism of the role of different dimensions of social capital with the objective of the operational performance of physical education.

3. A study on the impact of social capital on the operational performance of physical education Studies on the core functions of social capital, including corporate social capital, school social capital, and sport and social capital, have indicated that social capital can have a positive effect on organizational effectiveness at different levels, here again including both economic performance-oriented and non-economic performance-oriented organizations. One of the studies on the relationship between

social capital and school development found that developing social capital related to the school's career contributed to the development of the school and led to better operational performance.

Having these rich or communicative resources will bring more opportunities and information to the members in the network through positive interactions, and that the generation of social capital needs to emphasize the construction of social networks and the positive interactions of the different actors in the network

## Conceptual Framework



## Research Methodology

**Research Design** This study employed a cross-sectional design to explore the interrelationships among the variables.

**Participants** The sample comprised 387 core PE teachers from 36 primary and junior high schools in Shanxi Province. Participants were selected using convenience sampling.

**Data Collection Instruments** A structured questionnaire was developed based on existing literature, ensuring validity and reliability.

**Variable Operationalization** Key constructs such as social interaction, absorptive capacity, cognitive trust, shared vision, and operational performance were measured using validated scales.

**Analytical Methods** Data were analyzed using SPSS for descriptive statistics and SEM by AMOS for hypothesis testing.

**Ethical Considerations** The study adhered to ethical guidelines, ensuring informed consent, confidentiality, and the voluntary nature of participation.

## Research Result

**Result objective 1 found that:**

Test direct effect of H1 – H 4

**Table 1** the Path Coefficients of Structural Equation Models Test

Path hypothesis	Estimate	S.E.	C.R.	P value
H1: Social interaction positively influences shared vision absorptive capacity;	0.261	0.052	5.445	0.000*
H2: Cognitive trust positively influences shared vision	0.250	0.061	6.843	0.000*
H3: Absorptive capacity positively influences shared vision	0.261	0.055	6.412	0.000*
H4: Shared vision positively influences the operational performance of physical education	0.272	0.061	6.813	0.000*

Note: \* P<0.001

From table 1 the Path Coefficients of Structural Equation Models Test found that P value of H1 – H4 <0.001 the hypothesis were significant accepted than mean

1. Social interaction positively influences shared vision absorptive capacity.
2. Cognitive trust positively influences shared vision
3. Absorptive capacity positively influences shared vision
4. Shared vision positively influences the operational performance of physical education.

Research result objective 2 as follow:

By Boos Trapping test mediating roll

**Table 2** Test mediating role by Boos Trapping

Parameter	Estimate	Lower	Upper	P
H5 shared vision play a mediating impact between social interaction and operational performances of physical education	0.067	0.017	0.123	0.007

Parameter	Estimate	Lower	Upper	P
H6 shared vision play a mediating impact between cognitive trust and operational performances of physical education	0.069	0.018	0.125	0.006
H7 shared vision play a mediating impact between Absorptive capacity and operational performances of physical education	0.071	0.019	0.129	0.006

The role of shared vision play a mediating impact between social interaction, Absorptive capacity, and cognitive trust on operational performances of physical education were confidence interval upper and lower of .017 and .0123, .018 and .123, .019, and .129 corresponding to a 95% 0.017, 0.124, the upper and lower interval values do not contain 0, indicating that the mediating effect of shared vision play a mediating impact between social interaction, Absorptive capacity, and cognitive trust on operational performances of physical education. so the hypothesis is established

### **Hypotheses Testing**

#### **Direct Effects:**

H1: Social interaction positively influences shared vision (Estimate = 0.261, p < 0.001).

H2: Cognitive trust positively influences shared vision (Estimate = 0.250, p < 0.001).

H3: Absorptive capacity positively influences shared vision (Estimate = 0.261, p < 0.001).

H4: Shared vision positively influences operational performance (Estimate = 0.272, p < 0.001).

#### **Mediating Effects:**

H5: Shared vision mediates the relationship between social interaction and operational performance (p = 0.007).

H6: Shared vision mediates the relationship between cognitive trust and operational performance (p = 0.006).

H7: Shared vision mediates the relationship between absorptive capacity and operational performance (p = 0.006).

## Discussion

This study takes the pathway relationship between social capital, absorptive capacity and the operational performance of physical education as the research object, and attempts to explore and clarify the mechanism of action between social capital, absorptive capacity and the operational performance of physical education. To ensure the smooth conduct of the study, 387 core physical education teachers from 36 primary and junior high schools of various types in Shanxi were randomly selected as respondents using a convenience sampling method to obtain relevant data based on their perceptions, awareness and judgments of social capital, absorptive capacity and operational performance of physical education.

- 1) Based on the literature review, construct and define the concept of potential variables related to this study.
- 2) Construct a theoretical model and give research hypotheses.
- 3) Develop a survey questionnaire (scale) based on the theoretical model and research hypothesis.
- 4) To integrate and statistically analyze the data collected through a large sample survey and to discuss the results of the analysis.
- 5) Synthesize theoretical deductions, empirical analysis and case studies to give research conclusions, management insights and future research outlook.

The findings corroborate existing literature on the positive impact of social capital and absorptive capacity on organizational performance. Shared vision emerged as a critical mediator, aligning with prior studies highlighting its role in fostering collaboration and goal alignment. This study extends these insights to the domain of physical education, offering valuable implications for educators and policymakers.

## Implications

**Managerial Implications:** School administrators should prioritize building trust and enhancing social interactions among staff to promote a shared vision.

**Theoretical Implications:** The integration of social capital and absorptive capacity theories offers a robust framework for understanding PE performance.

## Conclusion

1) Social interaction positively influences shared vision absorptive capacity. Cognitive trust positively influences shared vision. Absorptive capacity positively influences shared vision. And Shared vision positively influences the operational performance of physical education.

2) Shared vision play a mediating impact between social interaction, Absorptive capacity, and cognitive trust on operational performances of physical education

The study found many enrich the theoretical model. At the same time, this study will further enrich the research results on physical education and physical education reform in China and provide relevant theoretical references for the strong implementation of physical education reform in China.

## Sugession and Recommendation

Through the article research, the access to and reliance on resources is no longer measured by a single quantification, excluding physical capital and human capital, the concept of social capital which emphasizes interpersonal social interaction and relationship has been clearly proposed and deeply familiar, the theory has a strong explanatory power to the existing relevant social network relationship and resource integration, which is conducive to the enrichment of social science development theory, but the research content of this article is only on the secondary school in Shanxi Province. However, the research content of this paper is only a research analysis of secondary schools in Shanxi Province, and there is still a need to progress an expansion of the research object as well as the research direction, and a multi-dimensional analysis of the factors affecting the operational performance of school physical education, so as to further enrich the research results about physical education and physical education reform in China, and can provide relevant theoretical references for the strong implementation of physical education reform in China.

## Contribution

1) Using the explanatory power of social capital theory and absorptive capacity theory, a theoretical model of social capital affecting the operational performance of physical education is constructed at the school organization level.

2) This study can further enrich the research results on physical education and physical education reform in China, and can provide relevant theoretical references for the strong implementation of physical education reform in China.

3) As one of the key concerns of China's education reform, the use of social capital theory to explore the experiences and shortcomings in the development process of physical education can serve as an important reference for the development of physical education in China.

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