

# The Role of Critical Thinking in Reshaping Public Administration Education: A Framework for Innovation

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**Abstract:** Public administration education plays an important role in social governance in contemporary society with rapid development of globalization and information technology. In the face of the increasing complexity and challenge of public administration, public administration education has to innovate and adapt to new requirements. In this context, cultivation of critical thinking is widely recognized as the key to improve public administration education effectiveness. Based on Bruner's constructivism theory, this research explored how to promote the active construction and practical application of knowledge by integrating critical thinking and reshape the teaching and learning processes of public administration education. The aim of this research was to fill the gap between theoretical and practical research on the combination of critical thinking and public administration education in existing literature and to provide a systematic framework for educators and policy makers to better understand and play the role of critical thinking in public administration education.

**Keywords:** Critical Thinking; Public Administration Education; Theory of Constructivism; Educational Innovation; Teaching Strategies

## 1. Introduction

Public administration education (PAE) is essential for social governance. With rapid development of globalization and information technology, the complexity and challenge of public management have also increased, which requires PAE to innovate and adapt to new needs. In this context, critical thinking skills are recognized as key factors in enhancing

PAE effectiveness [1]. Research has shown that systematically incorporating critical thinking can greatly enhance problem-solving skills and decision-making quality among public management students [2].

The importance of critical thinking has been extensively acknowledged. However, practical application and integration in PAE are constantly being questioned. The existing research has focused on investigating the definition and measurement of critical thinking skills and their application effects in specific educational activities [3, 4]. Although these research works have provided some basic insights, there is still a lack of systematic theoretical guideline on deeply integrating critical thinking with PAE.

This research gap can be partially explained by constructivist theory proposed by Bruner. The theory noted that education had to pay more attention to active exploration and knowledge construction processes of students and cultivation of critical thinking was the core of this process [5]. However, most studies have failed to link constructivist theory to the application of critical thinking in PAE, which limits the comprehensive understanding of its educational value and practical impact.

This research introduced constructivist theory to PAE and discussed how critical thinking could reshape the teaching and learning process of PAE by promoting the active construction and practical application of knowledge. Existing interdisciplinary studies have shown that constructivist theory has successfully been applied to medicine and engineering education and has promoted critical thinking skills among students [6]. The main contribution of this research was to address theoretical and practical research gaps in the existing literature on the combination of critical thinking and PAE. By applying constructivism theory, this research provided a

systematic framework to help educators and policy makers better understand the role and value of critical thinking in PAE.

This paper is structured as follows: The first part is literature review, which reviews the relevant research works and points out its shortcomings. The second part describes the theoretical framework, which provides a detailed discussion on the theoretical mechanism of constructivism in reshaping PAE paradigm. The third part discusses practical framework, which mainly explores the integration method of critical thinking into PAE through specific teaching strategies and methods. Finally, conclusion and discussion is provided, summarizing research findings and proposing future research directions.

## 2. Literature Review

### 2.1 Critical Thinking Concepts and Applications in Higher Education

Application of critical thinking in higher education has attracted great attention due to its significant role in enhancing academic and professional capabilities. Definition of critical thinking covers elements such as interpretation, analysis, evaluation, inference, and self-regulation [7, 8]. Phan (2010) [9] extended this concept, emphasizing the dynamic interaction of critical thinking and self-regulation. Researchers believe that critical thinking can improve educational outcomes through the promotion of metacognitive awareness. Combined critical thinking with self-regulated learning strategies can significantly promote academic success and career development by enhancing analytical skills and reflective practice. Bezanilla (2019) [10] further evaluated practical approaches to cultivate critical thinking in higher education and identified effective strategies such as oral and written reflections, argumentation, reading, analysis, resource synthesis and case studies. Their research emphasized the need for interactive and reflective teaching strategies for the promotion of active learning and critical participation, which was in line with student-centered learning philosophy.

Although these research works have made progress, there are still gaps in the practical application of critical thinking in different educational backgrounds. Miri, David and

Zoller (2007) [11] provided empirical evidence showing that structured teaching strategies (including practical problems and inquiry-oriented experiments) remarkably enhanced the critical thinking ability of students by investigating the impacts of explicit teaching of higher-order thinking skills among high school freshmen.

### 2.2 Current Status and Challenges of PAE

Integration and application of critical thinking in PAE is considered as a key approach to improve the analysis and problem-solving abilities of future public managers. Baracskey (2020) [12] found that integrating diversity, cultural competence and global awareness was crucial to cultivate critical thinking of students in public affairs. However, they are often taught independently, hindering the full development of critical thinking skills in students. He suggested using a comparative method for public administration and policy to effectively correlate these themes and enhance the understanding of students of public services in a diverse world.

Rosenbaum (2014) [13] reviewed the historical development of PAE, highlighting the shift to new public management and the challenges it posed, including increased reliance on private sector and weakened government capacity. He pointed out that PAE needed to adapt to contemporary challenges and ensure that future public managers could cope with complex social problems through the integration of diversity and cultural competence.

Sahuichenko and Volokitina (2020) [14] suggested that the main function of modern education was creating a mechanism to enable continuous learning. This mechanism, which prepared for contemporary challenges and certain educational risks, needed to follow the principle of lifelong education.

### 2.3 Application and Innovation of Constructivist Theory in Education

Constructivist theory holds that learning is an active process and learners mainly construct new concepts by existing knowledge and experience. Bruner (1960, 1966) [15, 5] suggested that education should pay attention to active exploration and knowledge construction processes of students, which has been extensively applied in mathematics and

social science courses. For example, in mathematics education, spiral curriculum structure was applied to help students better understand and use new concepts by repeatedly reviewing and deepening knowledge. This method not only improved the learning efficiency of students, but also cultivated their critical thinking ability.

Stapleton and Stefaniak (2019) [16] reviewed Bruner's effect on instructional design practice. Educational technology and instructional design have been significantly improved using constructivist theory. Bruner's concept of a spiraled curriculum, which holds that material is introduced and continuously reinforced until mastery, has influenced adaptive learning and mastery education in modern society.

Furthermore, constructivism has also made revolutionary changes in educational psychology. Magoon (1977) [17] jointly promoted the development of constructivism and emphasized the significance of social interaction and situational learning. These theories have significantly affected the cognitive development and innovation of educational methods in children. In particular, Vygotsky's sociocultural theory emphasized on knowledge construction process in social interactions, which is of great importance for understanding and applying constructivist theory.

Constructivist theory has provided a powerful framework and its implementation in practical teaching also faces some challenges. Teachers need to have certain degrees of professional skills and knowledge to effectively design and organize spiral courses. At the same time, lack of educational resources and support systems may limit the comprehensive promotion of constructivism teaching method. Furthermore, individual differences among students also need to be fully taken into account in teaching design to guarantee that all students can benefit from it.

Although the existing research works has provided significant insights into the application of critical thinking and constructivist theory in education, there are still important research gaps and implementation challenges in the practical integration of PAE. The following specific manifestations could be mentioned here: (1) It is generally assumed that critical thinking

improves academic and professional ability, but its application and evaluation in different educational backgrounds are still insufficient. (2) Integration of critical thinking into PAE is essential to cultivate the ability of future managers to analyze and solve problems. However, in existing literature, topics such as diversity, cultural competence and global awareness are often taught independently and systematic integration is missing. Thirdly, constructivist theory holds that learners learn through active exploration and knowledge construction, promoting the enhancement of educational technology and instructional design. However, its implementation in practical teaching faces some challenges such as high professional knowledge requirements and insufficient educational resources. Hence, exploring to the methods of systematically integrating critical thinking and constructivist theory in PAE not only helps improve education quality, but also cultivates public management talents with high-level critical thinking and practical application abilities to better cope with complex and changeable management challenges in modern society.

### 3. Theoretical Framework

The cores of the theoretical framework introduced in this research were constructivist theory and critical thinking, which aimed to enhance the interaction between knowledge construction and social practice in PAE by integrating critical thinking. Specifically, constructivism teaching strategies enhanced the knowledge construction and social practice abilities of students by promoting critical thinking. This framework not only provided a new perspective to understand educational innovation, but also provided feasible guidance for practical teaching.

Constructivism theory was proposed by Piaget and Bruner, emphasizing that knowledge was actively constructed by the interaction of learners and environment and social cooperation [5, 18]. In PAE, constructivism teaching strategies such as situational learning, collaborative learning and problem-based learning can effectively stimulate the learning motivation of students and promote deep understanding and flexible application of knowledge. These strategies encourage students to construct knowledge while solving practical problems and improve their social

practice ability through providing real public management situations [19].

Critical thinking is a self-directed and disciplined way of thinking and can help students make effective decisions and judgments in complex and changing environments [7]. In education, the cultivation of critical thinking can enhance the independent thinking and problem-solving abilities of students to improve educational efficiency. Critical thinking not only contributes to knowledge construction, but also enhances the social practice ability of students through cognitive processes such as analysis, evaluation and reflection allowing them to make rational and effective decisions in the field of public management.

As independent variables, constructivist teaching strategies stimulate the active learning and social interaction of students through situational learning, collaborative learning and problem-oriented learning. These teaching strategies improve the ability of students to analysis, evaluate and reflect by promoting the cultivation of critical thinking. Critical thinking also promotes deep understanding and application of knowledge and enhances the social practice ability of students by reflection and practical application. This mechanism connects teaching strategies and educational effects, establishing a complete theoretical framework.

#### **4. Practical Framework**

This practical framework was a continuation of the theoretical framework. The main objective was to systematically integrate critical thinking into PAE through specific teaching strategies and methods to cultivate public management professionals with high-level ability and literacy of critical thinking.

##### **4.1 Teaching Strategies**

To effectively integrate critical thinking into PAE, this research proposed three main teaching strategies. Firstly, through in-depth analysis of specific public management cases, case study method helped students apply critical thinking in real situations and cultivate their problem-solving and decision-making abilities. Students continue to enhance their understanding and critical thinking on complex management issues through group

discussions, case reports and classroom presentations. Secondly, critical writing required students to complete writing tasks related practical public management problems such as policy analysis and program design, encourage them to conduct self-reflection and critical assessment in writing process, and provide feedback to each other through peer review to further deepen thinking. Finally, simulated decision-making allowed students to play different roles in role-playing and decision-making simulations by designing simulated public management-related situations such as government meetings and crisis responses to experience the positions and decision-making processes of different roles and analyze the application and shortcomings of critical thinking in decision-making in review and discussion to exercise their decision-making ability and critical thinking in practice.

##### **4.2 Teaching Methods**

In PAE, effective teaching methods are essential for the integration of critical thinking. Blended learning is a teaching method which combines traditional classroom teaching and online learning resources and promotes the cultivation of critical thinking through various teaching methods. Specifically, to assist classroom teaching, teachers can provide online courses, video lectures and discussion forums related to critical thinking. This method can not only enrich the learning of resources students, but also enhance their autonomous learning and critical thinking abilities. Furthermore, application of interactive teaching methods in the classroom, such as group discussions, brainstorming, etc., can stimulate the critical thinking of students and enable them to exercise their analytical and evaluation skills in discussions and debates. Project-based learning further cultivates the critical thinking and problem-solving ability of students through their independent project research and implementation. In this teaching method, teachers can design projects involving practical public management problems, require students to conduct in-depth research and propose solutions, and encourage interdisciplinary cooperation to broaden the horizons of students and enhance their critical thinking ability. By demonstrating and

evaluating project results, students can not only present their research results, but also further strengthen their critical thinking through the feedback of peers and teachers.

#### 4.3 Teaching Evaluation

To ensure the effective integration and application of critical thinking in PAE a comprehensive teaching evaluation system must be developed. Firstly, formative assessment was run through the whole teaching process. Through regular quizzes, assignments, classroom discussions and other teaching materials, the learning progresses and critical thinking ability development of students were understood in real time. Through detailed feedback and guidance, students were helped to continuously improve and enhance their critical thinking skills. Secondly, summative assessment was carried out at the end of the course. Through final examination, thesis, project report and other comprehensive assessment methods, the critical thinking ability and application level of students in the whole learning process were comprehensively evaluated to ensure assessment fairness and objectivity to provide basis and reference for future teaching improvement.

#### 4.4 Safeguard Measures

To ensure the effective implementation of critical thinking teaching strategies in PAE, this research proposed two key safeguards. Firstly, it is very important to provide systematic teacher training programs. Teachers need to receive special training programs to master teaching methods, evaluation criteria and feedback mechanisms of critical thinking. These training programs should not only cover theoretical knowledge, but also include practical skills. Teachers can share best practices and continuously improve teaching methods through teaching seminars and experience exchange activities. Secondly, it was necessary to provide sufficient teaching resources and technical support and establish a teaching resource library related to critical thinking including case base, video lectures and online courses, to provide teachers and students with a wealth of learning materials. Simultaneously, schools should be equipped with modern teaching equipment and technical support such as online learning platforms and interactive classroom software to guarantee the

smooth progress of teaching activities. These resources and technical support can create a good environment for the teaching and learning of critical thinking and promote the realization of educational goals.

#### 5. Conclusion and Discussion

By constructing theoretical and practical frameworks, this research discussed the role of critical thinking in reshaping PAE, aiming to systematically integrating critical thinking in PAE to cultivate public management professionals with high-level ability and literacy of critical thinking. The main findings and contributions of this research were as follows:

Firstly, through literature review and theoretical analysis, this research clarified the importance of critical thinking in PAE. Although the existing research has emphasized on the value of critical thinking, there are still significant theoretical and practical gaps in the application of PAE. Brunner's constructivist theory provided a solid theoretical basis for understanding and applying critical thinking. By promoting active construction of knowledge and social interaction, critical thinking can effectively improve PAE quality.

Secondly, this research proposed a series of specific teaching strategies and methods to realize the systematic integration of critical thinking in PAE. Teaching strategies such as case study method, critical writing and simulated decision-making help students practically exercise and improve their critical thinking ability through application and reflection in real situations. Teaching methods such as blended learning and project-based learning stimulate the learning motivation and critical thinking of students through various teaching methods and resources to be able to flexibly apply the knowledge they have learned to practically solve problems.

Thirdly, this research emphasized the importance of teaching evaluation in critical thinking integration process. Through formative and summative assessments, the learning progress and critical thinking development of students are understood in real time and detailed feedback and guidance are provided to guarantee the realization of teaching objectives. At the same time, it puts forward systematic teacher training and sufficient teaching resources and technical

support as safeguard measures to guarantee the effective implementation of critical thinking teaching strategies.

Although this research proposed a systematic theoretical and practical framework, it still faced some challenges in practical applications. For example, teachers needed to have sufficient professional knowledge and skills to effectively design and organize critical thinking teaching activities. Furthermore, the lack of educational resources and technical support might limit the comprehensive promotion of critical thinking teaching method. Future research should further investigate how to optimize critical thinking teaching strategies and methods in different educational backgrounds and how to promote extensive application of critical thinking in PAE through policy support and resource allocation.

#### Acknowledgment

This paper is supported by Teaching Reform Project of China Jiliang University: HEX2023037

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