Exploring the Problems and Countermeasures of Modernization of Education Management in Zhengzhou Middle School

HaoRan Xin and Pimporn Charuchit
Udon Thani Rajabhat University, Thailand
E-mail: 251618194@qq.com, ORCID ID: https://orcid.org/0009-0007-1038-5767
E-mail: pimporn.ch@udru.ac.th, ORCID ID: https://orcid.org/0009-0005-3387-5211

Abstract

Background and Aims: This paper is based on complexity theory and takes Habermas' communicative behavior theory as the perspective from which to analyze and attribute the current situation of educational alienation caused by technologism and instrumental rationality in the modernization of middle school education management. On this basis, it aims to explore the establishment of scientific and humanized educational management methods, achieve the vision of harmonious communication between teachers and students, and promote students' free and comprehensive development.

Methodology: The author conducted a literature review to develop an interview outline and carried out unstructured in-depth interviews with six teachers and administrators from a secondary school in Zhengzhou. The interviews focused on practical effectiveness, future trends, and personal evaluations to analyze issues related to resource allocation, the level of informatization, and assessment systems.

Results: The text discusses four interrelated dilemmas in educational management: rationality, hierarchy, specialization, and excellence. The rationalization process has led to the dominance of experts and super-specialization, reinforcing bureaucratic systems and undermining teachers' professional spirit. This results in a hierarchical structure focused on performance evaluations. Addressing these challenges requires an integrated approach based on complexity theory.

Conclusion: The article examines the challenges faced by middle schools in Zhengzhou during the modernization of education management. It highlights issues such as outdated teaching methods, lack of resources, and inefficiencies in management systems. The text also suggests countermeasures, including the adoption of modern technologies, improved teacher training, and reforms in administrative structures. These measures aim to enhance the overall quality and efficiency of education management in the region.

Keywords: Exploring the Problems; Countermeasures of Modernization; Education Management

Introduction

In the context of rapid technological advancement and social transformation, the modernization of education management has become a critical issue for secondary schools worldwide. Particularly in Zhengzhou, a city that has experienced swift economic and cultural development, middle schools are facing unprecedented challenges and opportunities in modernizing their management practices. The introduction of technologism and instrumental rationality, while enhancing efficiency, has also led to significant problems such as educational alienation, weakened teacher-student relationships, and a narrowed focus on quantifiable outcomes over holistic student development (Habermas, 1984; Biesta, 2010).

This study, grounded in complexity theory and informed by Habermas' theory of communicative action, seeks to systematically explore the problems arising from the modernization process of education management in Zhengzhou middle schools. Furthermore, it aims to propose countermeasures that not only uphold scientific principles but also emphasize humanistic values, fostering environments where students can develop freely and comprehensively (Cilliers, 1 9 9 8). By critically examining existing management models and practices, this research aspires to contribute meaningful insights and practical strategies for achieving harmonious teacher-student communication and sustainable educational development in the era of modernization.

Objectives

1 . Analyze the problems arising from the process of modernizing secondary education administration, particularly the impacts of technocentrism and instrumental rationality, which have led to educational alienation. Conduct a systematic analysis using complexity theory and Jürgen Habermas' theory of communicative action.

2. Propose a new approach to educational administration that integrates scientific rigor with a deep concern for human values, aiming to foster harmonious communication between teachers and students and to create an environment that supports students' holistic and free development.
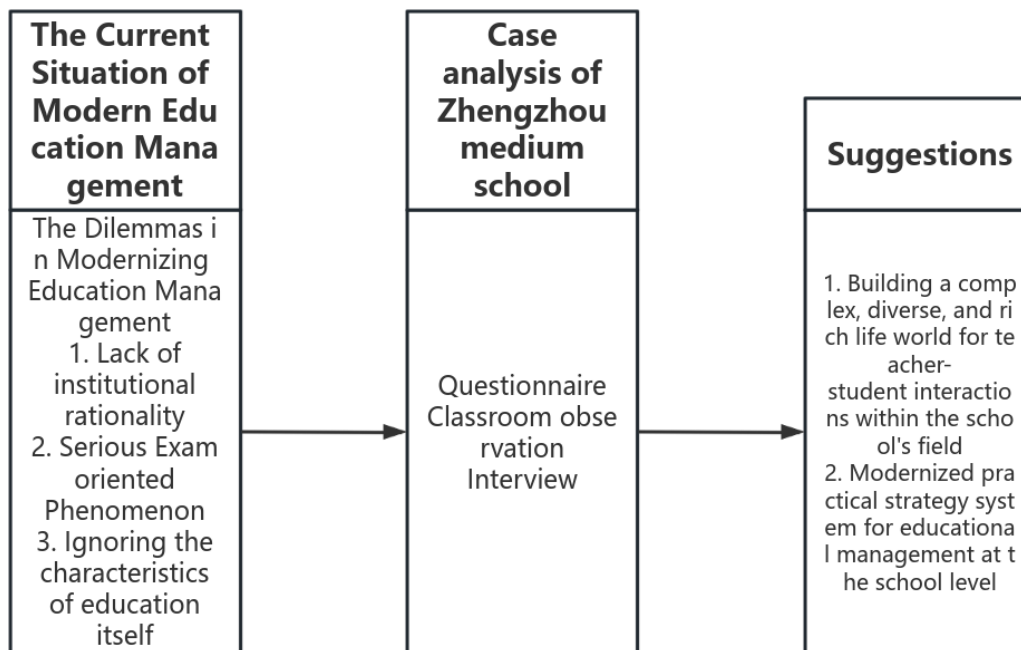
Conceptual Framework

Figure 1 Research model

Methodology

Research Design

Firstly, define the concepts of modernization of middle school education management and students' modern personality spirit, examine the development process of school education management, and understand its modernization development trajectory and characteristics; Conduct an investigation into the modernization of current secondary school education management, and analyze the problems and reasons. Secondly, drawing on theoretical tools such as complexity theory and communicative rationality, based on a thorough analysis of the problems faced by the modernization of middle school education management, this paper points out the significance of the modernization of middle school education management. Finally, propose a new concept of modern development in middle school education management, analyze its connotation and significance, explain how to help school educators establish this new modern development concept, and then propose principles for teaching and management based on the new modern concept, pointing out how to carry out teaching and management under the guidance of this new modern concept.

Data collection methods
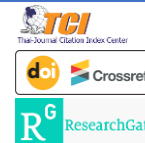
The purpose of this study is to use the current survey of management modernization in Zhengzhou Middle School as an example to explore the problems and attributions presented by the modernization of middle school education management, and to consolidate the data basis for proposing feasible strategic suggestions. For this purpose, the study used a questionnaire, observation, and interview methods for data collection and analysis.

The questionnaire method is the main data collection method of this study, aiming to obtain the attitudes, opinions, and perceptions of managers, teachers, and students towards the modernization of middle school education management. The questionnaire design sets questions from the perspective of modernization of school management, in order to understand the implementation and effectiveness of the modernization of middle school education management.

The observation method is an auxiliary data collection method for this study, aiming to verify the objectivity and reliability of the questionnaire survey results by observing and recording the actual operation of the modernization of middle school education management.

The interview method is a deep data collection method used in this study, aiming to gain a deeper understanding of the specific implementation and effectiveness of the modernization of middle school education management, as well as the opinions and suggestions of relevant stakeholders. The interviewees include school administrators, teachers, and students, and the interview content will revolve around the understanding, practice, and personal experience of modern management.

Data collection steps

Firstly, the author will randomly select a small number of students and teachers from each grade of the school to conduct a questionnaire test. The content of the test questionnaire is set at the level of modern school management tools. Through trial testing, identify issues in the questionnaire that have a narrow scope and unclear latitude division, to further improve the content and dimensions of the test paper based on the testing.

Secondly, based on the questionnaire test, the content and dimensions of the test paper are further adjusted. At the levels of teachers and students, investigations are conducted from the aspects of information technology software and hardware facilities, management assistance in teaching, organizational structure, and democratic participation.

Research result

Teacher questionnaire results

By conducting a questionnaire survey on the teachers and students of Zhengzhou Middle School, the current objective situation of the modernization of middle school education

management was sorted out. The following analysis mainly focuses on information hardware facilities, information teaching management, organizational structure, communication feedback, and other aspects.
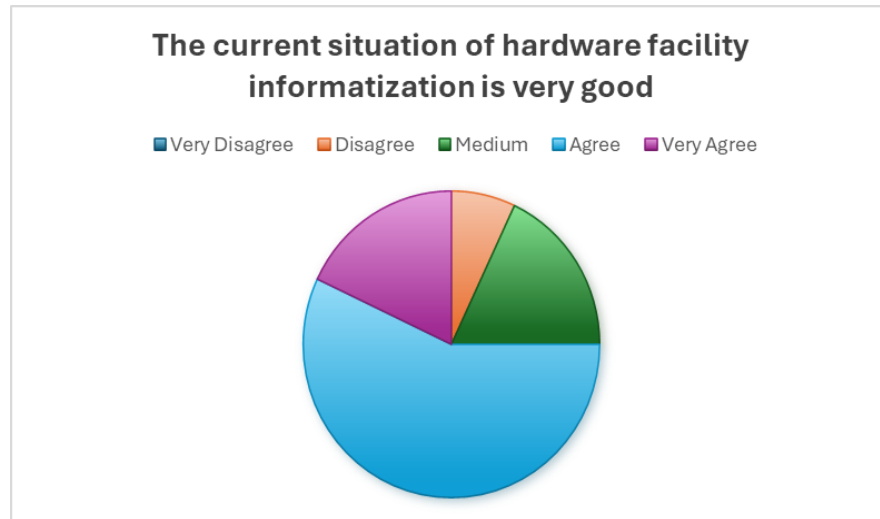

Figure 2 Current status of hardware facility informatization

Figure 2 shows teachers' views on the current informatization status of school hardware facilities. The figure shows that 18% of teachers believe that hardware infrastructure informatization is very sufficient, and 57% of teachers believe that informatization is relatively sufficient. More than 70% of teachers believe that the informatization of hardware facilities is quite sufficient.
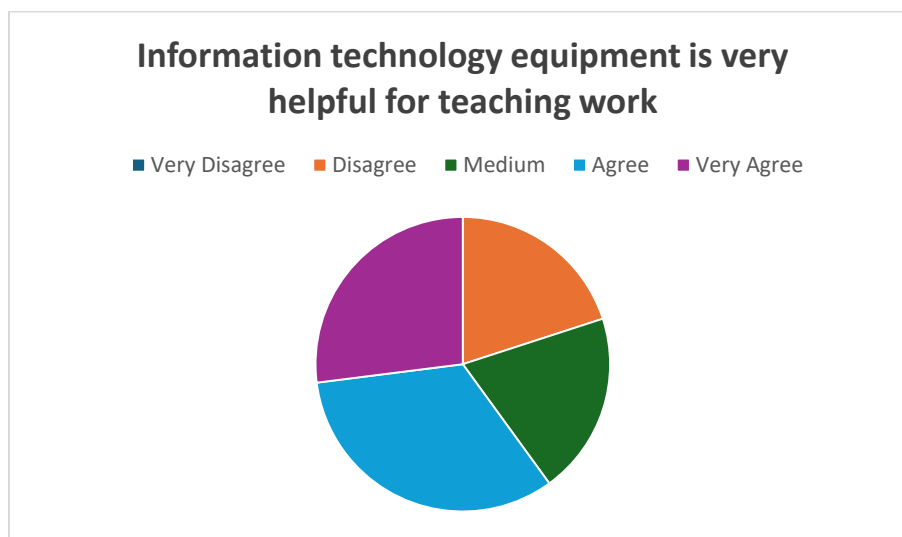

Figure 3 The assistance of information technology equipment in teaching work

Figure 3 shows teachers' views on whether information technology equipment has a helpful effect on teaching work. All teachers believe that information technology equipment has helped their teaching work to some extent, while only 20% of teachers believe that the assistance is less.
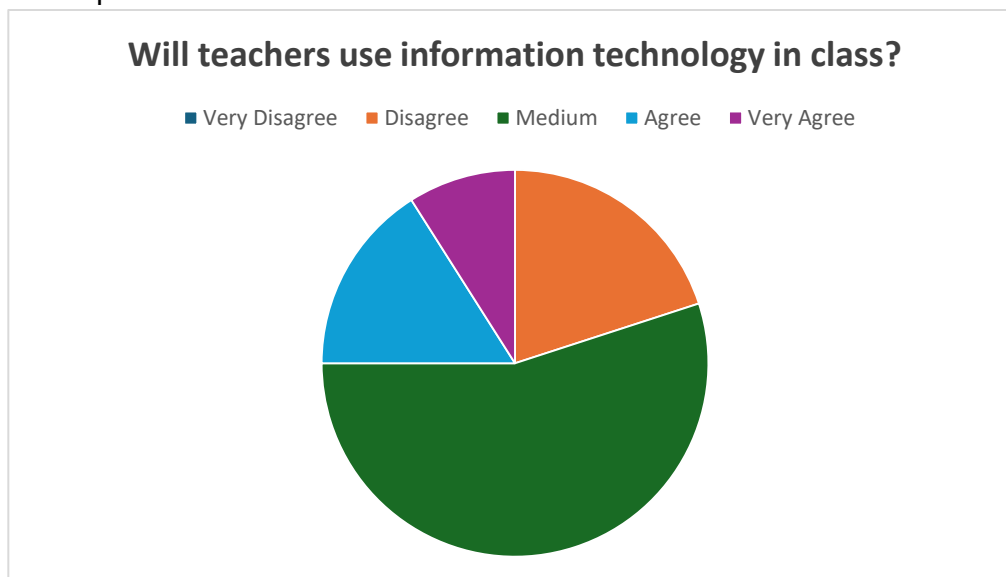
Student questionnaire results

Figure 4 Will teachers use information technology in class?

Figure 4 shows students' views on the use of information technology in teaching management. All students believe that the school has used information technology for teaching management, but more than 70% of students believe that the frequency of use is insufficient. It can be seen that schools still need to strengthen the frequency and coverage of the use of information technology in teaching management.
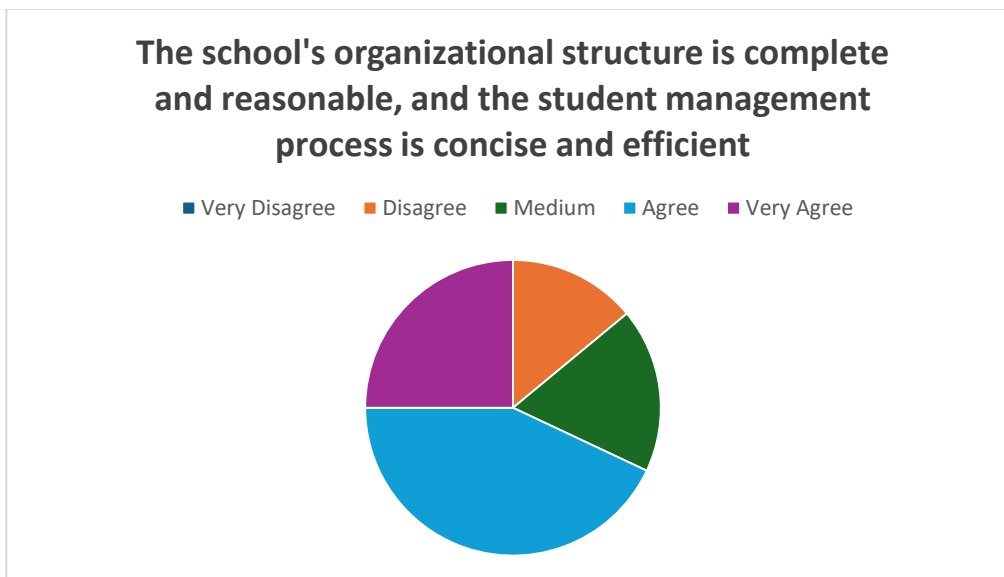
Figure 5 The school's organizational structure is complete and reasonable, and the student management process is concise and efficient.

Figure 5 shows students' views on the school's organizational structure and student management workflow. 68% of students believe that the school's organizational structure is reasonable and that student management work is more convenient and efficient.
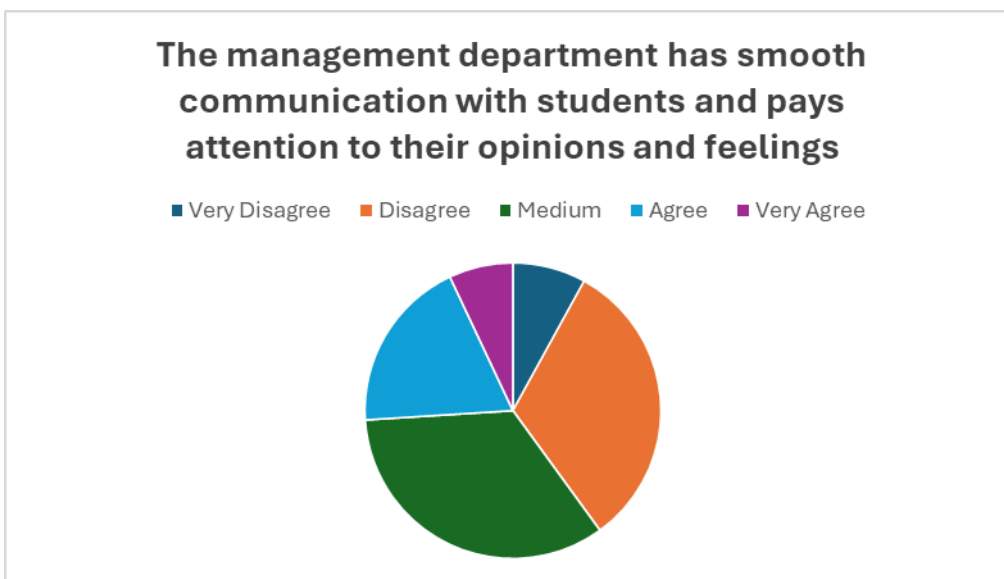

Figure 6 The management department has smooth communication with students and pays attention to their opinions and feelings.

Figure 6 shows students' views on communication and feedback from the school management department. Only less than 20% of students believe that the management department can communicate with students promptly and pay attention to their feedback. Forty percent of students believe that the management department failed to communicate with students promptly and pay attention to their feedback, with a much higher proportion than the teacher group. This indicates that the school management has, to some extent, ignored students' feedback and subjective feelings.

Analysis of the Causes of Problems

The dilemma of the rationality of the education system

Rationality, a key aspect of modernity, is closely linked with the process of rationalization. Rationality arises from the interaction between humans and the world, with individuals confirming their existence through their actions. According to complexity theory, rationality is an open and evolving process, requiring a constant dialogue between theory and experience (Gleick, 1987). Moran (2016) argued that rationality is incomplete and must be self-critical, whereas rationalization, on the other hand, seeks to explain the world in a fixed and self-sufficient theoretical system. Rationality tends to embrace complexity, while rationalization seeks simplicity and can lead to rigid frameworks (Weber, 1978).

Weber (1978) viewed modernization and rationalization as intertwined historical processes, with Western society's modernization being a shift towards rationalization. Rational behavior in society can be divided into instrumental rationality (focused on achieving specific goals through calculated decision-making) and value rationality (driven by ethics, morality, and religious beliefs). In the context of a market-driven economy, instrumental rationality dominates, which often blurs moral values and leads to a focus on efficiency and fairness (Habermas, 1984). However, human behavior extends beyond mere transactions, as values and moral considerations also play a role (Sennett, 2006).

In education, rationality becomes problematic when it aligns with utilitarian goals, such as efficiency, discipline, and exam-oriented systems. Teachers and students are subjected to constant supervision and performance metrics, leading to an environment where students become "sophisticated egoists" focused only on personal gain. This system limits their ability to make independent choices and disregards the deeper values of education. Ultimately, the issue lies in the dominance of purposive rationality, which obscures the true essence of education (Nussbaum, 2010).

Difficulties in Educational Specialization

Professionalization often excludes public involvement and aims to conceal research and expert actions to avoid criticism. Experts, as a privileged social group, monopolize and fragment

knowledge, making issues inaccessible to the public (Freidson, 2001). Super specialization creates professional discourse that the general public cannot engage with, resulting in a closed system where communication is restricted (Habermas, 1984). In education, subject teachers establish hierarchies based on their specialized knowledge, positioning themselves at the top and measuring students' abilities in a one-way teaching process. This reduces students to specialized, one-dimensional individuals, erasing their personal experiences, emotions, and creativity, which deviates from the true purpose of education (Dewey, 1938).

Popper and Moran view scientific theories as fallible and open to refutation, fostering a democratic community of continuous improvement (Popper, 1972; Moran, 2016). However, the professionalized mindset in education, reinforced by rigid systems of formal logic, stifles critical thinking and self-correction. Teachers' professional knowledge becomes a closed system, imposing its logic on students, which reduces them to mere copies of the system (Foucault, 1977).

Super specialization and industrial-scale production further erode the professional spirit. In modern large-scale factories, labor is no longer defined by professionalism but by mechanical collaboration, reducing workers to mere cogs in the machine (Braverman, 1974). Education mirrors this shift, where teaching, once a platform for teachers to demonstrate their professional skills, is now dominated by an intermediary system that prioritizes efficiency and hierarchy. This top-down structure often leaves teachers and students with little autonomy, turning schools into mere processing plants (Sennett, 2006). Teachers lose their professional spirit, and students lose opportunities for free development. Education, without the meaningful engagement of teachers and students, becomes an automated system devoid of human connection and personal growth (Nussbaum, 2010).

Integration of the Four Difficulties of Modernizing Education Management

The text discusses four dilemmas in the modernization of educational management: the dilemma of rationality, hierarchy, specialization, and excellence. Upon analysis, it becomes clear that these dilemmas are interconnected and mutually reinforcing. The rationalization process, driven by a rationalist paradigm, has fostered the dominance of technical experts and super-specialization. This professionalization and rationalization support bureaucratic systems, leading to a hierarchical structure that diminishes teachers' professional spirit and promotes a focus on performance in evaluations. Personal moral inclinations further reinforce rationalization and closure.

These four dilemmas are not isolated but form a complex, integrated problem that evolves from one another. Science, technology, and purpose rationality all interact in intricate ways with super specialization, unidirectional thinking, performance prioritization, and an excellence-driven

culture. Understanding and addressing these dilemmas requires an integrated approach, which is in line with the principles of complexity theory and complexity methods.

Conclusion

The modernization of educational management is related to the orderly promotion of educational modernization and the overall layout of social modernization. How to solve the various drawbacks that have emerged in the process of modernization at this stage, liberate learners' thirst for knowledge, and thus achieve the construction of an individual modernity spiritual personality structure and an equal, democratic, harmonious, and beautiful life world has become an urgent matter that needs to be clarified and solved.

This article examines the modernization dilemma of current school education management from the perspective of schools, and divides it into four dilemmas: rationality dilemma, bureaucratic dilemma, specialization dilemma, and performance-based dilemma. Attempt to clarify the dilemma of school management more deeply from different perspectives. But even under such efforts, we should still see that the four dilemmas are mutually causal and complex, forming a complete dilemma of the modern spirit. Therefore, based on the rationality system centered on communicative rationality, the two principles of justice as fairness, the assumption of the original state, complexity, and other theories, the school life world is constructed. In it, everyone thinks independently and converses freely and equally, becoming a designer of personal life and a builder of public life.

Discussion

Any thinking can only progress based on the work of predecessors. Standing on the shoulders of giants allows us to transcend old paradigms and thinking frameworks and re-examine educational issues. But at the same time, giants themselves may also become old objects without realizing it, becoming cages that constrain our thinking. As Moran (2016) said in Methods, "The concepts of systems theory, cybernetics, and information theory have helped me transcend old ways of thinking, but they carry new simplified forms... We must not confine ourselves to certain concepts that are liberated in the initial stage of structure, but become imprisoned in the reconstruction stage. It should be understood that danger lies hidden in what can bring us temporary liberation." The thinking surrounding the issue of human essence will never stop, and any existing ideas that break through the cocoon and take shape urgently need to be surpassed by people. Transcendence is not only the essential requirement of complexity, but also the inevitable direction of communicative rationality, and is the essence of education (Habermas, 1984).

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Limitation

What this article does is only a slight reflection on the modernization of secondary school education management based on previous theories. Modernization of educational management is a top priority in the development of educational management, and bringing forth new ideas through innovation is an inevitable requirement for development. The research on the modernization of education management is still in the exploratory and practical stage, and there are still more problems to be solved. What I hope is that these reflections can become materials for subsequent educators and researchers to criticize and surpass.

Recommendations

The text discusses the complexities and challenges of modern educational teaching, emphasizing the limitations of over-rationalized, teacher-centered classrooms. It critiques traditional methods where teachers control every aspect of the classroom, leaving little room for student autonomy, creativity, or critical thinking. The ideal classroom should be a dynamic interaction between teachers and students, where uncertainty and divergent thinking bring vitality and innovation. Teachers should encourage open dialogue, allowing students to express their thoughts and solve problems, while guiding discussions and providing resources. Teaching should be a communicative process, not just a one-way presentation of knowledge.

1. The relationship between humor and education

The text explores the concept of interest in education, drawing on the ideas of Herbart and Dewey. Herbart emphasized cultivating diverse interests in students, while Dewey critiqued educational approaches that separate means from ends or focus solely on future rewards. Dewey argued that true learning interest arises from the alignment between students' growth and the subject matter, rather than external inducements. The text further highlights the complex relationship between interest, cognition, and education, suggesting that learning is an evolving process influenced by various factors, including teachers, students, and social contexts. It concludes that education should guide and orient interest without attempting to preset the outcomes or process of learning.

2. Diversified thematic teaching

The text discusses the importance of themes in education, emphasizing that they should not be seen as an end in themselves or merely as preparation for specific professions. Instead, themes should facilitate self-development and self-actualization. Dewey advocated that educational themes should be drawn from students' current life experiences and interests to guide their professional growth. Philosophically, human interest ultimately revolves around self-awareness, with the theme of "I" being central to all human knowledge. This theme leads to

various sub-themes in disciplines such as natural sciences, social sciences, and philosophy. Teachers should focus on these broad themes in their teaching, fostering an interdisciplinary and student-centered approach to learning.

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