

The Influence of Educational Informatization on the Transformation of Teachers' Teaching Style

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Abstract: With the rapid advancement of information technology, a powerful wave of educational informatization has emerged globally, profoundly impacting traditional education systems and teaching activities. This transformation has not only altered students' learning methods but has also compelled teachers to make significant adjustments in their teaching styles. This paper will delve into the characteristics of educational informatization, analyzing its specific effects on the transformation of teachers' teaching styles. By exploring the challenges and opportunities presented by this shift, the study aims to highlight the necessity for educators to adapt to new teaching paradigms. Additionally, the paper will propose corresponding strategies to facilitate this transition, providing insights for teachers' professional development and enhancing education quality. Through this analysis, the research seeks to contribute to a better understanding of how educational informatization shapes teaching practices and to offer practical guidance for teachers navigating this evolving landscape. Ultimately, the goal is to support educators in leveraging technology effectively to foster improved learning outcomes and engagement among students.

1. Introduction

Entering the 21st century, the rapid development of information technology has brought about unprecedented changes in the field of education. From the introduction of digital teaching resources to the development of online interactive platforms, the informatization of education has become an important driving force for educational reform. Teachers' teaching styles, as one of the factors that most directly affect learning outcomes in the educational process, have also undergone significant changes under this background. Research shows that teachers' teaching styles not only affect the classroom atmosphere, but also influence students' learning motivation and learning outcomes. In the era of educational informatization 2.0, 5G mobile networks, big data, cloud computing, the Internet of Things, digital campuses, and smart classrooms have not only subverted the functional forms and ecological scenarios of traditional school education, but also reconstructed the teaching process, educational management, and learning evaluation from the inside out^[1]. Therefore, it is particularly important to explore the impact of educational informatization on the transformation of teachers' teaching styles.

2. The concept, characteristics, types, and basic models of teachers' teaching styles

2.1 The concept of teacher's teaching style

Teaching style refers to the characteristics of teaching activities. It is the unique and harmonious combination and regular manifestation of a teacher's educational ideas, personality traits, and educational skills in the educational process^[2]. The formation of a teaching style is a sign that a teacher is becoming mature in the art of teaching.

2.2 Characteristics of teachers' teaching style

Firstly, the artistry of teaching refers to the skillful application of techniques in the teaching process, which reflects an artistic effect, giving a sense of harmony and fluency, and is full of artistic appeal. Secondly, the creativity of teaching refers to the uniqueness in the handling of teaching content, the selection of teaching methods, and the organization of the teaching process. It allows the teacher's creative thinking to be fully utilized and displayed in classroom teaching. Thirdly, the effectiveness of teaching refers to the successful acquisition of knowledge, the training of intellectual and practical skills, and the development of students' moral character. Lastly, the stability of psychological qualities refers to the consistent and persistent pursuit of a teacher in long-term teaching practice, reflecting the teacher's good psychological quality, distinct personality, and high confidence in establishing such a teaching style^[2].

2.3 Types of teachers' teaching styles

Teachers exhibit various teaching styles, each with distinct characteristics. The rational type focuses on clear logic and thorough analysis, using logical thinking to control the classroom and influence students to think calmly and independently. The natural type is characterized by friendly and sincere communication, creating an atmosphere of equality and harmony, allowing students to gain knowledge quietly. The emotional type is passionate and caring, fostering a strong emotional connection and mutual understanding, guiding students in character and emotional development. The humorous type uses vivid and witty explanations, interweaving humor and wisdom to engage students and promote active thinking. Lastly, the skillful type excels in teaching methods and techniques, employing multimedia and targeted activities to ensure efficient knowledge acquisition.

2.4 The basic model of teachers' teaching style

Imitation - Selection - Directional - Innovation is the basic model for the formation of teaching styles^[3].

The formation of a teaching style involves several stages. Initially, teachers engage in imitation to learn and understand different teaching styles, but they must avoid blind copying. Next, they select a teaching model based on personal characteristics, interests, strengths, and conditions. After choosing a model, they design a direction for their teaching style development and work towards it in practice. Finally, through continuous effort, they innovate to create a unique, high-level teaching style that integrates various elements into a harmonious whole, achieving mastery.

3. The Formation Process of Teachers' Teaching Styles

Many scholars have conducted research on the formation paths of teachers' teaching styles. Zhao Hairong mentioned that teachers need to go through three stages to form their own teaching styles:

imitating others, understanding oneself, and continuously exploring in the combination of learning, thinking, and practice^[4]. Wu Xinmin mentioned that the process of forming a personalized teaching style includes learning humbly, practicing bravely, promoting and protecting one's own personality, and improving professional skills and quality^[5]. Zhang Zhaoquan believes that to become a teacher with a unique style, one must first understand oneself, because style is who you are. Then, by going through the process from imitation to creation, one can board their own "special train" of style^[6].

On this basis, the formation of teachers' teaching styles is a continuous development process from imitation to creation, from experience to sublimation, and from teaching to interaction. In this process, teachers need to continuously accumulate practical experience, deepen their theoretical understanding, and gradually shape and perfect their personal styles through diversified strategies. Based on this, Li Rum and Huang Huili believe that the formation of teachers' teaching styles can be achieved through multiple pathways, including mainly practical improvement, theoretical guidance, key breakthrough, transplantation compatibility, and overall construction models^[7].

4. Factors Affecting the Transformation of Teachers' Teaching Styles

4.1 The Promotion of Educational Policies and Reforms Educational

Policies and reforms are important factors affecting the transformation of teachers' teaching styles. When new educational policies are introduced or reforms in teaching concepts and methods are promoted by a country or region, teachers need to adjust and update their teaching styles in a timely manner to meet the new requirements of educational development.

4.2 The Application of Technological Advancements and Digital Tools

The rapid development of information technology has brought profound changes to teaching methods. The widespread use of digital tools and online resources has made classrooms more interactive and attractive. Teachers can innovate teaching methods, enrich teaching content, and enhance students' learning experiences through means such as multimedia teaching, smart devices, and online platforms.

4.3 Changes in Students' Needs and Learning Styles

The needs and learning styles of students are constantly changing, and students from different generations have different expectations for educational content and teaching methods. This requires teachers to be more flexible and diverse in teaching, actively responding to students' personalized and differentiated learning needs. In addition, teachers' professional development and reflective abilities are also key to the transformation of teaching styles. Through continuous learning and reflection, teachers can better understand new educational concepts, actively try and optimize new teaching strategies, and promote the innovation and development of teaching styles.

4.4 School Environment and Colleague Support

The supportive environment of the school and the cooperative atmosphere among colleagues play an important role in the transformation of teachers' teaching styles. If the school actively advocates innovative teaching and provides rich teaching resources and development platforms, it will encourage teachers to explore and practice new teaching methods. Cooperation and experience sharing among colleagues can also promote improvement and innovation in teaching methods.

4.5 New Requirements of Educational Development for Teachers

The world today is experiencing a great change unseen in a century. The popularization of online new media and the rapid development of artificial intelligence are constantly changing the way people live, learn, and work. The collision of diverse values and the changes in the growth environment of adolescents pose new challenges to talent training. Since the comprehensive popularization of compulsory education in China in 2011, educational needs have shifted from "having access to education" to "receiving quality education". It is necessary to further clarify the goals of "what kind of people to train, how to train them, and for whom to train them", and optimize the school's training system. In the face of the impact of the COVID-19 pandemic, it is also necessary to strengthen the curriculum's support and guidance for online learning and other aspects. These new requirements force teachers to continuously adjust and optimize their teaching styles to adapt to the demands of the times and educational reform.

4.6 New Problems in Curriculum Implementation

Although the current "Compulsory Education Curriculum Setting Experimental Plan" and various curriculum standards have played a positive role in promoting educational reform, there are still problems that are not adapted to the new situation. For example, there is insufficient vertical connection between different school stages, the curriculum standards lack specific requirements on "to what extent to learn", teachers lack scientific basis for grasping the depth and breadth of teaching, and the requirements for curriculum implementation are not clear enough. In response to these problems, it is necessary to revise and improve the curriculum plan and standards in a targeted manner to better guide teachers to improve teaching methods and styles. On April 21, 2022, the Ministry of Education also emphasized the importance of deepening curriculum reform and strengthening the construction of compulsory education curriculum at a press conference (April 21, 2022, the Ministry of Education held a press conference) ^[8].

Through the combined effect of these factors, teachers' teaching styles continue to evolve to meet the requirements of the new era and improve the quality and effectiveness of teaching.

5. The influence of educational informatization on teachers' teaching style

5.1 Diversification of Teaching Resources

The development of educational information technology has enabled teachers to access high-quality teaching resources from around the world, such as MOOCs (Massive Open Online Courses), online videos, and open educational resources. These resources not only enrich teachers' lesson preparation materials but also encourage them to try new teaching content and forms.

5.2 Promotion of Interactivity and Collaborative Learning

Modern educational tools, such as Learning Management Systems (LMS), online discussion forums, and real-time polling software, have enhanced interaction between teachers and students as well as among students. In this context, teachers begin to encourage students to ask questions, participate in discussions, and even solve practical problems through group cooperation in class. This shift not only makes students more actively involved in learning but also prompts teachers to adopt more flexible guidance methods to help students gain a deeper understanding.

5.3 Data-driven Personalized Teaching

By utilizing educational technology, teachers can collect and analyze students' performance data during the learning process. These data help teachers identify students' strengths and weaknesses, thereby implementing personalized teaching strategies. For example, through tracking by learning software, teachers can find that some students are confused about specific knowledge points, and then provide targeted tutoring and support. This process of adjusting teaching according to data analysis promotes teachers to shift from a single preset teaching model to a more flexible, one-on-one teaching approach.

6. The Transformation of Teachers' Teaching Styles in the Context of Informationization

Due to the impetus of educational informatization in the application of diverse teaching methods, a noticeable trend has emerged in the transformation of teachers' teaching styles. Teachers are shifting from being mere knowledge transmitters to becoming learning facilitators and motivators. Recognizing that students can access vast amounts of knowledge online, educators are redefining their roles to guide and inspire students in navigating and integrating information. Moreover, there is a growing emphasis on student-centered classroom design. Teachers are now more attuned to students' needs and feedback, employing a range of teaching strategies such as project-based learning and flipped classrooms to foster independent and collaborative learning. Additionally, the integration of multimedia teaching is on the rise. By incorporating various media like videos, audios, and interactive whiteboards, teachers are able to connect teaching content with students' daily lives and interests, thereby enhancing the enjoyment and efficacy of the learning process.

7. The coping strategies of the influence of educational informatization on the transformation of teachers' teaching style

7.1 Enhance Information Technology Literacy and Embrace Educational Reform Proactively

Teachers should actively learn and master modern educational technologies, such as online teaching platforms, smart classroom tools, and educational big data analysis, to improve their application skills of digital teaching tools. By participating in information-based teaching training, online learning, and practical operations, they can gradually achieve a smooth transition from traditional teaching to information-based teaching.

7.2 Deepen Educational Concepts and Update Teaching Ideas

Teachers need to establish a student-centered educational philosophy, understanding that information-based teaching is not just about using tools, but also about innovating teaching thinking and methods. Teachers should actively pay attention to the forefront of education, draw on advanced teaching concepts, and deeply integrate information technology with subject teaching to promote the development of personalized and diversified teaching.

7.3 Innovate Teaching Design and Enrich Teaching Models

Under the background of informatization, teachers need to actively explore and innovate teaching models, such as blended learning, flipped classrooms, and project-based learning, and flexibly use digital resources to design more interactive and inspiring teaching activities. At the same time, they should pay attention to the organic combination of online and offline teaching to

enhance the interest and effectiveness of the classroom.

7.4 Strengthen Interdisciplinary Cooperation and Expand Teaching Horizons

Teachers can carry out interdisciplinary teaching cooperation with teachers from different subjects through information platforms, integrate knowledge from multiple fields, and promote interdisciplinary teaching. Interdisciplinary teaching design not only enriches classroom content but also stimulates students' innovative thinking and comprehensive quality.

7.5 Deepen Teacher-Student Interaction and Focus on Individualized Learning Needs

Teachers should use information technology to build a diversified interactive platform, timely understand students' learning feedback and needs, and adjust teaching strategies. With the help of learning data analysis, teachers can implement precise teaching and differentiated tutoring to meet the individual development needs of students and enhance the interactivity and participation of the classroom.

7.6 Build a Sharing Platform to Promote Resource Integration and Sharing

Teachers can actively participate in on-campus and off-campus educational resource sharing platforms, gather high-quality teaching resources, and achieve joint construction and sharing of resources. Through forms such as teaching case sharing and excellent class display, schools can promote experience exchange and cooperation among teachers, and jointly improve the level of information-based teaching.

7.7 Strengthen Reflection and Practice to Continuously Optimize Teaching Styles

Teachers should integrate information technology into teaching practice, constantly reflect on and summarize teaching effectiveness, find and improve existing problems. Through continuous teaching experiments and student feedback, educators can gradually form a unique information-based teaching style, and achieve a double improvement in teaching quality and classroom effect.

7.8 Rely on Professional Development Platforms to Expand Growth Paths

Teachers can use online education research communities, professional development platforms, and other resources to participate in academic research and teaching innovation projects related to educational technology. Through continuous learning and academic exchanges, teachers can continuously expand career development paths and enhance the theoretical support and practical ability of information-based teaching.

7.9 Create a Supportive Environment to Promote Teaching Innovation

Schools should provide sufficient information-based teaching support for teachers, such as improving hardware facilities, providing technical training, and establishing incentive mechanisms, to create a good environment for teachers to innovate teaching styles. At the same time, schools should establish a teaching team cooperation mechanism to encourage teachers to jointly explore and practice information-based teaching models.

Through the above multi-dimensional strategies, teachers can actively respond to the challenges brought by educational informatization, achieve the effective transformation of teaching styles,

promote the continuous improvement of classroom teaching quality, and comprehensively promote the growth and development of students.

8. Future Outlook

Looking to the future, educational informatization will continue to drive the evolution of teachers' teaching styles. In this process, teachers need to continuously learn emerging technologies and flexibly use various educational tools to meet the learning needs of the new generation of students. At the same time, educational managers and policymakers need to provide teachers with more support, including providing technical training, optimizing equipment facilities, and encouraging innovation, to promote the healthy development of educational informatization.

9. Conclusion

John Hagel, co-chair of the Center for the Edge, explained: "The accelerating change of information technology presents challenges and opportunities for learners and learning. In terms of challenges, the efficiency of using technology in learning is definitely low. Technology can also lead people to believe that the 'knowledge' component of things can be taught through technology, while the implicit methods of combining other skills with this knowledge can be obtained at almost zero incremental cost." Educational informatization provides rich momentum and opportunities for the transformation of teachers' teaching styles. Teachers need to make full use of modern information technology, improve their information literacy, and flexibly adopt a variety of teaching strategies to improve teaching quality. Through active adaptation and change, teachers can not only enhance their professional abilities but also better support the comprehensive development of students and promote the progress of the education cause.

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