INFLUENCE OF MICRO-TEACHING MODE ON STUDENTS' PERFORMANCE OF DATONG PRIMARY SCHOOL IN SICHUAN PROVINCE, CHINA

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ABSTRACT
The objectives of this study were 1) to study influence of micro-teaching mode on students' performance, and 2) to study students' satisfaction of micro-teaching mode, 3) to compare the pretest and posttest of micro-teaching mode of primary students, and 4) to study primary school students' opinions on learning with micro-teaching mode. The population consisted of 321 students at Datong primary school in Qingbai Jiang district, Chengdu, Sichuan province in the first semester of the academic year, 2022. In the control group, there were 162 students from Class 1-3, and in the experimental group, there were 159 students from Class 4-5.The instruments used in this study were 1) online media for use in flipped classroom activities, 2) self-directed learning ability test, 3) the achievement test and 4) a questionnaire on student's opinions. The statistics used for data analysis were mean, standard deviation, and t-test. The research results revealed that 1) development of micro-teaching mode on students' performance as a whole was at a good level. 2) The results of learning achievement of micro-teaching mode on students' performance as a whole was at a good level. 3) The micro-teaching mode on students' performance of students was higher than pretest at statistically significant level of .05. 4) The results of student's opinions towards micro-teaching mode on students' performance as a whole was at a good level.
Keywords: Micro-Teaching Mode, Students' Performance, Datong Primary

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INTRODUCTION

In the backdrop of the rapid development of modern science and technology, many industries are experiencing unprecedented growth and transformation, particularly in fields such as electronic information technology and high-end equipment manufacturing. This evolution drives the continuous updating of relevant disciplinary knowledge, often at a pace that can be difficult to comprehend. Traditional educational methodologies frequently struggle to keep up with these advancements, creating a pressing need for innovative teaching approaches.

In recent years, the information age has catalyzed the rise of micro-courses as a popular educational model. The advancement of network communication and the proliferation of electronic devices have enabled learning to transcend the confines of traditional offline environments. Micro-courses, characterized by their rich content, flexible learning schedules, and diverse methodologies, represent a new paradigm in education that caters to a wide range of learners. These courses are not only designed for school students but also appeal to professionals and lifelong learners seeking to enhance their skills.

One of the key advantages of micro-courses is the freedom they offer learners to select their learning times and locations, thereby fostering an environment conducive to self-directed study. This independence empowers individuals to engage with content that aligns with their existing knowledge levels and learning needs. Moreover, micro-courses can be tailored to address specific challenges faced by learners, making them particularly effective for targeted skill development.

The micro-course teaching mode embodies a core philosophy of simplicity and innovation. Through the accumulation, sharing, and communication of resources, learners can master professional skills and evolve into highly competent professionals in their respective fields. A critical aspect of this process is cultivating students' interest in learning, which plays a vital role in their educational journey. To achieve this, educators must prepare thoroughly for both the design and implementation of micro-courses, embracing innovative teaching strategies and leveraging information technology to enhance engagement.

To optimize the teaching process effectively, educators should focus on several key factors. First, the content must be logically structured, with each knowledge and skill point connected to form a comprehensive networked knowledge system. This holistic approach encourages learners to see the interrelationships among concepts, facilitating deeper understanding. Second, knowledge should be presented in accordance with organizational principles, transitioning from general to specific and from abstract to concrete. By aligning the sequence of content delivery with student feedback and characteristics, educators can create a more engaging and relevant learning experience.

Finally, the optimization of teaching methods is paramount. There is no universally superior teaching method; instead, the effectiveness of an approach often lies in its adaptability to different learning contexts. In micro-course instruction, a variety of teaching methods should be employed synergistically to enhance learning efficiency and foster students' enthusiasm for acquiring knowledge.

This study aims to investigate the influence of the micro-teaching mode on students' academic performance and their overall satisfaction with this innovative teaching approach. By exploring these dimensions, we seek to understand how micro-courses can be leveraged to cultivate a deeper interest in learning and to equip students with the skills necessary to navigate the complexities of their future careers successfully.

LITERATURE REVIEWS

Concepts and Theory of Modern Teaching Technology

Modern society is characterized by rapid advancements in science and technology. The integration of electronic devices such as computers, tablets, and smartphones into educational

settings has transformed traditional teaching methodologies. These tools serve as effective resources that invigorate classroom instruction, creating new platforms for course design and fostering a more engaging learning atmosphere.

The application of modern educational technology enriches the curriculum, enabling seamless connections between classroom instruction and real-world applications. The use of multimedia technology in teaching enhances the educational experience, making it more dynamic and comprehensive. This shift towards technological integration not only improves teaching efficiency but also enriches research methods, promotes teacher growth, and encourages timely updates in pedagogical practices.

As universities increasingly invest in modern teaching technologies, classrooms are now equipped with advanced tools such as electronic whiteboards and wireless microphones. The implementation of multimedia resources in education has become crucial for enhancing teaching quality. In the information age, there is a demand for high-quality talent, and educators must skillfully combine theoretical knowledge with practical application to harness the advantages of modern teaching technology.

Moreover, modern teaching technology emphasizes both the development and utilization of learning resources and the learning process itself. It integrates various educational technologies—ranging from audio-visual aids to digital simulations—to optimize classroom instruction, improve the learning environment, and ultimately enhance student engagement and interest in learning.

The growing prominence of multimedia teaching materials enables educators to present information through diverse formats, including text, images, sound, and video. This multimedia approach facilitates active learning by stimulating multiple senses, thereby motivating students to engage more deeply with the content.

As traditional sources of knowledge shift from teachers and textbooks to digital platforms, educators must adapt to new roles as facilitators of knowledge rather than mere transmitters. The Internet and multimedia technology provide avenues for students to acquire knowledge more independently, fostering a culture of exploration and inquiry.

Overall, modern educational technology plays a critical role in developing students' cognitive and creative abilities. To build a new teaching model, it is essential to integrate computer and network technologies into the core of educational practices, ensuring that students are equipped with the necessary skills to thrive in a technology-driven world.

Concepts and Theories to Stimulate Students' Interest in Learning

The foundation of effective learning lies in fostering students' interest in knowledge. Renowned physicist Albert Einstein once stated, "Interest is the best teacher." Interest serves as a vital internal motivator that drives students to engage with the learning material. Cultivating this interest can enhance students' initiative and enthusiasm, particularly among adolescents whose self-awareness is developing.

Research shows that students who are interested in a subject tend to perform better academically. This correlation highlights the importance of aligning teaching methods with students' interests and hobbies. When students perceive learning as engaging rather than tedious, they are more likely to delve deeper into the subject matter and seek advanced knowledge.

The integration of modern information technology in the classroom facilitates improved communication between teachers and students. By utilizing digital platforms and communication tools, educators can address students' questions and concerns in real time, fostering a supportive learning environment. This enhanced communication not only strengthens the student-teacher relationship but also encourages active participation in the learning process.

Modern teaching technology allows educators to engage students' attention through diverse methods, ultimately promoting active thinking and participation. By creating conditions conducive to inquiry-based learning, teachers can guide students toward more profound understanding and respect for individual differences, thus facilitating comprehensive development.

To stimulate students' interest, educators should employ innovative teaching designs that leverage modern information technologies. The effective use of multimedia resources can evoke curiosity and captivate students' attention, encouraging them to explore the subject matter more passionately.

Concepts and Theories of Micro-Courses

Micro-courses have emerged as an effective supplementary teaching approach, encompassing various educational functions such as textbook interpretation, topic elaboration, and skill demonstration. Typically, a micro-course is a brief audio or video lesson focused on a specific knowledge objective, utilizing multimedia technology for delivery.

Advantages of Micro-Courses:

Time Efficiency: Micro-courses are typically limited to 10 minutes, aligning with research that indicates human attention spans are most effective within this timeframe. This structure allows for concentrated learning during periods of high focus.

Content Distinction: Micro-courses are designed around specific themes, emphasizing brevity, interactivity, and practical application. This clear focus creates favorable conditions for personalized learning experiences.

Learner-Centered Focus: Micro-course design shifts the focus from teachers' instruction to students' learning. This emphasis on the essential aspects of knowledge encourages students to engage actively with the material.

Flexibility: Micro-courses enable learners to access content at their convenience, allowing for repeated viewings and personalized pacing. This flexibility enhances students' autonomy in their learning journeys.

Clear Positioning of Micro-Courses:

Producer Positioning: Course creators must ensure clarity and organization in their content while enhancing visual and auditory elements to optimize engagement.

Audience Positioning: Understanding the target audience is critical for delivering relevant and accessible content.

Scenario Positioning: Micro-courses typically adopt a one-to-one teaching approach, making teaching methods and environments more direct and impactful.

Time Positioning: Knowledge points should be concise, ensuring that each micro-lesson effectively conveys its content within a few minutes.

Knowledge Positioning: Clarity in content presentation is essential to prevent misconceptions and ensure accurate understanding.

Impact of Micro-Courses on Learning:

Interest Mobilization: Micro-courses enhance students' interest in learning by providing engaging, relevant content and interactive experiences.

Encouragement of Initiative: By fostering an environment of independent learning, micro-courses enable students to explore topics more flexibly and engage actively with the material.

Reduction of Teacher Burden: Well-designed micro-courses reduce the need for repetitive instruction, allowing teachers to focus on more complex aspects of teaching and student engagement.

Promotion of Effective Learning: By encouraging students to create their own micro-lessons, educators can enhance students' problem-solving skills and boost their confidence.

Through the strategic implementation of micro-courses, educational practices can evolve to meet the diverse needs of learners, ultimately improving teaching quality and supporting the goals of quality education.

RESEARCH METHODOLOGY

Population and sample Group

Population is 321 students from Datong Primary School in Qingbaijiang District, Chengdu City, Sichuan Province, China. The control group (non-micro course teaching mode group) is 162 students from Class 1 to Class 3, Qingbaijiang District Datong Primary School, Chengdu City, Sichuan Province, China. The experimental group (micro-course teaching mode group) is 159 students from Class 4-6, Grade 3, Qingbaijiang District Datong Primary School, Chengdu City, Sichuan Province, China

Research Instruments

The data collection tool used questionnaires 1-4 in this study to investigate all samples. Questionnaires 1-3 are the evaluation of students and parents' satisfaction and participation of micro-course teaching mode. It is divided into five levels: very satisfied, satisfied, relatively satisfied, general and dissatisfied. Questionnaire 4. The comprehensive scoring table of students' parents on the micro-course teaching mode has 20 questions and a total score of 100 points. Divided into five levels: very excellent, excellent, relatively good, good, and bad.

Data collection

The questionnaire was divided into four parts: The first part of primary school students' satisfaction with micro-course teaching, questionnaire Primary school parents' satisfaction with micro-class teaching, questionnaire. A questionnaire of primary school parents' participation in micro-lesson teaching The fourth part is the parents' comprehensive scoring table of the micro-course teaching mode. Study relevant documents and studies and drafted questionnaires, Submit a draft of the questionnaire to the experts. With to make recommendations and corrections. The questionnaire method was used to collect the sample data of 321 students and their parents from Datong Primary School in Qingbaijiang District, Chengdu City, Sichuan Province, China. According to the t-test method of two independent samples, the questionnaire was comprehensively evaluated on the students 'and parents' satisfaction and participation in the micro-course teaching mode. Revised the questionnaire and collected the data.

Data Analysis

The statistics used in this study are as follows:

1) Frequency distribution
2) Percentage
3) Average value ($\overline{X}$)
4) Pearson correlation coefficient

RESEARCH RESULTS

The study aimed to investigate the influence of the micro-teaching mode on students' academic performance and to assess student satisfaction with this teaching approach. The results are presented in two parts: the impact on academic performance and the analysis of student satisfaction.

Part 1: Influence of Micro-Teaching Mode on Students' Academic Performance

The analysis compared the final exam results of students in the control group and the experimental group. The findings are summarized in the table below:

Feature	Control Group (mean ± SD)	Experimental Group (mean ± SD)
Final Exam Results	88.32 ± 4.028	93.86 ± 3.325

The statistical analysis of the final exam performance is detailed below:
Control Group:
Mean: 88.32
Standard Deviation: ±4.028
R^2: 0.3573
t-value: 13.32
Degrees of Freedom: 319
95% Confidence Interval: 4.722 ~ 6.359
p-value: <0.0001 (significant difference)
Experimental Group:
Mean: 93.86
Standard Deviation: ±3.325
The results indicate a significant improvement in the final exam scores for the experimental group that utilized the micro-teaching mode, as evidenced by the p-value of less than 0.0001, which demonstrates a statistically significant difference between the two groups.
Part 2: Student Satisfaction with Micro-Teaching Mode
The study also evaluated student satisfaction with the micro-teaching mode through a survey. The results are as follows:
Satisfied Points: 94.04 ± 4.04
Satisfaction Proportions:
Very Satisfied: 20
Satisfied: 128
More Satisfied: 4
Same as Before: 7
Discontent: 0
A summary of satisfaction indicates that 93.08% of students expressed satisfaction with the micro-teaching mode. This high level of satisfaction further underscores the effectiveness of this teaching approach in engaging students and enhancing their learning experience.
Conclusion of Research Results
The analysis reveals that the implementation of the micro-teaching mode significantly enhances students' academic performance and fosters high levels of satisfaction. These findings suggest that integrating micro-teaching strategies in educational settings can lead to improved educational outcomes and a more engaging learning environment for students.

DISCUSSION & CONCLUSION

The findings from this study demonstrate the significant impact of the micro-teaching mode on students' academic performance and overall satisfaction. The experimental group, which utilized the micro-teaching approach, achieved a notably higher average score on the final exam (93.86 ± 3.325) compared to the control group (88.32 ± 4.028). The statistical significance of this difference, indicated by a p-value of <0.0001, highlights the effectiveness of micro-teaching as an instructional strategy.
1) Impact on Academic Performance: The increase in exam scores among students exposed to micro-teaching can be attributed to several factors. Micro-teaching allows for focused, concise lessons that cater to specific learning objectives, which can enhance comprehension and retention. The flexibility and accessibility of micro-courses enable students to review materials at their own pace, reinforcing their understanding of complex concepts. This approach aligns

with contemporary educational theories that emphasize active learning and student engagement.

2) Student Satisfaction: Additionally, the high satisfaction rate of 93.08% among students in the experimental group indicates that the micro-teaching mode resonates well with learners. Students reported feelings of engagement and motivation, which are crucial for fostering a positive learning environment. The ability to access content freely, coupled with varied instructional methods, likely contributed to heightened interest and enjoyment in the learning process.

3) Educational Implications: The results suggest that incorporating micro-teaching strategies can be particularly beneficial in primary education settings, where maintaining student interest and engagement is vital for effective learning. Teachers can leverage this model to adapt to diverse learning styles and preferences, ultimately enhancing the overall educational experience.

Conclusion

In conclusion, this study confirms that the micro-teaching mode significantly enhances students' academic performance and satisfaction levels. The compelling evidence presented in the findings supports the integration of micro-teaching as a pedagogical tool in educational settings.

As educational landscapes continue to evolve, it is essential for educators to embrace innovative teaching methods that foster student engagement and facilitate effective learning. The micro-teaching approach not only addresses the challenges posed by traditional instructional methods but also aligns with the contemporary demands of the information age, where students seek personalized and accessible learning experiences.

Future research could further explore the long-term effects of micro-teaching on student learning outcomes and satisfaction across different subjects and educational levels. Additionally, investigating the perspectives of educators implementing this teaching model could provide valuable insights into best practices and potential areas for improvement.

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