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Construction of a Teaching Platform of Modern and Contemporary Chinese Literature From the Perspective of Diversified Intelligence

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ABSTRACT

This paper discusses the functional principle of the theory in detail based on the theory of diversified intelligence and constructs a teaching platform of diversified intelligence. Then, this platform is applied to teaching in different cities, and the application of modern and contemporary literature teaching platforms in different cities is compared. According to the application indicators of each inter city teaching platform, the measures to improve the application rate of this teaching platform are put forward. In short, based on the theory of multiple intelligences, this paper provides some experimental and theoretical support for the development and progress of modern and contemporary Chinese literature.

KEYWORDS

China, Diversified Intelligence, Modern and Contemporary Literature, Teaching Platform, Vision

INTRODUCTION

The traditional "classroom monism" teaching model mainly relies on classroom teaching, and students passively receive knowledge, lacking the cultivation of practice, interaction, and critical thinking. However, this model clearly cannot meet the needs for the cultivation of applied talents. Applied talents require not only solid professional knowledge but also the ability to apply knowledge to practice, team collaboration, and innovation, change the training direction of academic talents in the past, build a diversified teaching platform, and innovate teaching methods, which not only helps students realize knowledge construction, ability improvement, and aesthetic edification (Wang, 2021).

Meanwhile, we should give full play to the characteristics of the times and cultivate realistic student care, market awareness, and an innovative spirit from the perspective of literature so students can adapt better to social needs and serve local economic, cultural construction, and social development, to complete the important mission of teaching in the training of applied talents (Liu, 2021). Despite recognizing the limitations inherent in traditional classroom monism and the call for a shift towards more interactive and innovative teaching methodologies, current literature often falls short in providing actionable frameworks for educators to adopt these changes. This paper aims to

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bridge this gap by offering detailed strategies and empirical evidence for successfully implementing diversified teaching platforms and innovative practices.

From the Republic of China to the 1980s and even the 1990s, the teaching tradition and teaching methods of this discipline can be described as intergenerational inheritance, with little change (Li & Zhang, 2022). Moreover, generation after generation of famous teachers stands out with wise and enlightening classroom teaching and solid and thoughtful academic research. However, in the past decade or two, the classroom teaching of this course has faced new challenges; of course, it also contains new opportunities (Xia, 2021).

In the 21st century, a great change in college classroom teaching is to display slideshow presentations made by teachers in advance through the combination of computers, projectors, and display screens. The initial function of computers and p-blades is to replace blackboard writing, saving blackboard writing time and increasing classroom capacity (Fugui, 2020). At the same time, displaying some precious and historical pictures or more words is very convenient. We can play movies and other video materials. In short, the initial function of modern teaching equipment with computers as the core technology is practical. However, it took only more than 10 years. By 2010, amazing changes have occurred in using Internet technology and computers in teaching. Based on retaining the basic functions, it has brought new teaching methods and concepts such as massive open online courses (MOOCs) and micro-teaching, which has also changed and even subverted the traditional classroom concept. In addition to the changes in daily student life, courses offered by schools, and social environment, the original teaching methods have been challenging to meet the needs of college students in the network era (Wang et al., 2022). All this forces the teaching of this course to make adjustments and reforms.

Internet technology brings not only lessons, micro-classes, flipped classes, and massive information obtained through mobile phones and computers but also diverse and contradictory values and artistic views (Liu, 2024). Especially in the past decade or two, conservative thoughts have made a comeback, constantly dissolving and subverting the modern spirit under the banner of science and democracy (Shen, 2020). This period is the growth period of current college students from childhood to youth. Thought is easily influenced by it, but it lacks the rationality to distinguish right from wrong. At the same time, the times have provided more space for their personality development (Jianbo et al., 2020). They attach importance to personal freedom, emphasize personal rights, and reject or even reject those boring and dry classes (Shen & Yaoyao, 2020).

The innovative enthusiasm for intelligent teaching is not high. The diversified intelligent teaching method can stimulate teachers to participate actively in diverse, intelligent teaching, improving practical student and teacher innovations, and abilities in scientific and technological research and development. However, due to the particularity of the diversified intelligent teaching method, it is easy to have contradictions between the diversified intelligent teaching and the traditional curriculum schedule of the school, which is not conducive to guiding the teaching schedule and stimulating the enthusiasm of students to listen to the class, making teachers who adhere to the traditional teaching mode unwilling to actively cooperate and communicate with teachers and students in the course of listening to the class, and lack the ability of independent innovation.

Traditional teaching often ignores the in-depth implementation of teaching objectives, teachers lack guidance in the application of methods to students in the classroom and ignore the cultivation and experience of students' own values, emotions, and attitudes, so that students are only limited to the knowledge of theory in their learning, which is not conducive to the creation of a positive teaching atmosphere. Teaching methods are limited. Many teachers often rely on a single, ineffective teaching method such as lecturing, and fail to engage in meaningful communication with their students during the teaching process. We must optimize the allocation of various methods according to the content of teaching materials, student knowledge, and the characteristics of intellectual structure, and design teaching methods to stimulate student intelligence, achieve good results, and cultivate multiple intelligences (Yan et al., 2020).

In an environment of multiple intelligences, providing students with a single material directly used to stimulate their intelligence is not the most important. The important thing is to design some meaningful activity forms or special study for students to stimulate their combination of various intelligences, while the multi-situational homework based on development potential creates a new space for students to develop their intellectual strengths and improve their intellectual weaknesses (Mustopa et al., 2024). Teachers should provide project materials that cross disciplinary boundaries, meaning learning resources are open and rich. Students can study different aspects of the same topic according to their interests, which gives them the freedom to choose learning materials and full opportunities to explore various learning areas. Abundant learning resources not only help multiple intelligences reach a comprehensive and qualified development level but also help learners find and strengthen their own superior intelligence. On the other hand, in project-based learning, students need to plan their own learning, which truly reflects the subjectivity of student learning (Feng & Zhang, 2023).

The theory of multiple intelligences emphasizes that each kind of intelligence has its own unique track, some developed earlier and some developed later (Zheng & Miao, 2021). In each individual, the structure of intelligence is also different. Therefore, diversifying teaching forms is the premise of developing multiple intelligences. Another important approach is that teachers can give full play to their superior intelligence. Let them use their own advantages to learn. For example, in poetry teaching, teachers can let students choose and combine voluntarily, form activity groups with different contents as the research objects, and put forward different tasks to them (Xiong et al., 2021).

Interpersonal communication intelligence is a very important aspect of multiple intelligences. Multiple interaction and collaborative learning can not only cultivate student communication awareness and ability but also develop student interpersonal skills. It can also help and promote vulnerable groups to achieve the effect of intelligent complementarity (Yan et al., 2020). In order to realize the complementary advantages among students, it is generally necessary to guide students to make a heterogeneous grouping based on their voluntary combination. Of course, just grouping students cannot improve student interpersonal skills (Ermakov et al., 2020). They must be guided purposefully. The core of interpersonal communication intelligence is the ability to pay attention to the differences between yourself and others. Therefore, in the process of student cooperation in completing a task, students can divide the work and grasp the progress speed by themselves by analyzing their own and others' abilities and specialties. After establishing a cooperative group, teachers should guide students to understand that it is not enough to be interested in learning at this time but also need a sense of responsibility (Yang & Yang, 2020).

Li et al. (2021) used the theory of multiple intelligences to conduct a detailed study on the teaching and learning of literature, which greatly promotes the development and progress of literature. Wang (2020) took the writing of contemporary Chinese as an opportunity to study the establishment of a contemporary Chinese teaching platform through diversified intelligent technology, which has a good application effect. Based on the individual differences in intelligence among students, Chen (2020) used multiple-intelligence technology to study the learning of contemporary poetry. The experimental results show that multiple intelligence theory can greatly improve student interest in learning contemporary poetry and is conducive to the development of contemporary poetry. Taking into account the low interest of people in learning literature, Yaskova and Kolosova (2020) used the theory of multiple intelligences to assist Internet technology, effectively combining student interests with modern and contemporary literature, which has advantageously improved the popularity and greatly promoted the application of literature.

Therefore, starting from the perspective of multiple intelligences, this paper studies the functional principle of multiple intelligences in detail and establishes a teaching platform for multiple intelligences. This platform is then applied to the study of literature between different cities. Targeted improvement measures are put forward by comparing the development and existing problems between different cities. In a word, this paper provides some ideas and references for the development and progress of modern and contemporary Chinese literature.

BACKGROUND

Function Principle Under the Vision of Diversified Intelligence

Multi-intelligence plays a crucial role in modern data analysis, and data mining algorithms are one of its core tools. Data mining is not just a replacement for traditional manual data analysis but an extension and deepening of traditional data analysis methods (Ma et al., 2024). It is based on massive data, and, through advanced algorithms and technologies, it enables machines to efficiently and accurately extract valuable information from massive data warehouses. Although data mining has powerful functions and potential, it cannot completely replace traditional data analysis. Traditional data analysis focuses on the basic statistics, description, and interpretation of data, while data mining focuses more on discovering hidden patterns, correlations, and trends in the data (Mou et al., 2024). Both have unique application value in different stages and fields of data analysis. The algorithms and ideas of data analysis are the foundation for implementing data mining.

With the development of technology, new algorithms and ideas continue to emerge, bringing more possibilities for data analysis (Zhang, 2024). Meanwhile, new methods of organization and implementation have also brought higher efficiency and accuracy to data mining. As a field with a long history, data mining has once again shown new vitality with the arrival of the big data era. It combines research achievements from multiple fields such as statistics, machine learning, and artificial intelligence, providing strong support for modern data analysis. To better analyze and solve the diversified intelligence, this paper adopts the multi-variate linear analysis algorithm, and its specific flow chart is shown in Figure 1.

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k \tag{1}$$

where $\beta_1, \beta_2, \ldots, \beta_k$ are regression coefficients that represent the degree of influence of each x variable on y. Specifically, each beta value represents the expected change in y when the corresponding x variable increases by one unit (assuming other variables remain unchanged). If β is a positive value, it indicates that y increases with the increase of x. If β is negative, y decreases with the increase of x. The matrix method is used for programming calculation.

The formula of the matrix method is as follows:

$$\alpha = \left(X^T X\right)^{-1} X^T Y = \left(\sum x_i x_i^T\right)^{-1} \left(\sum x_i y_i\right) \tag{2}$$

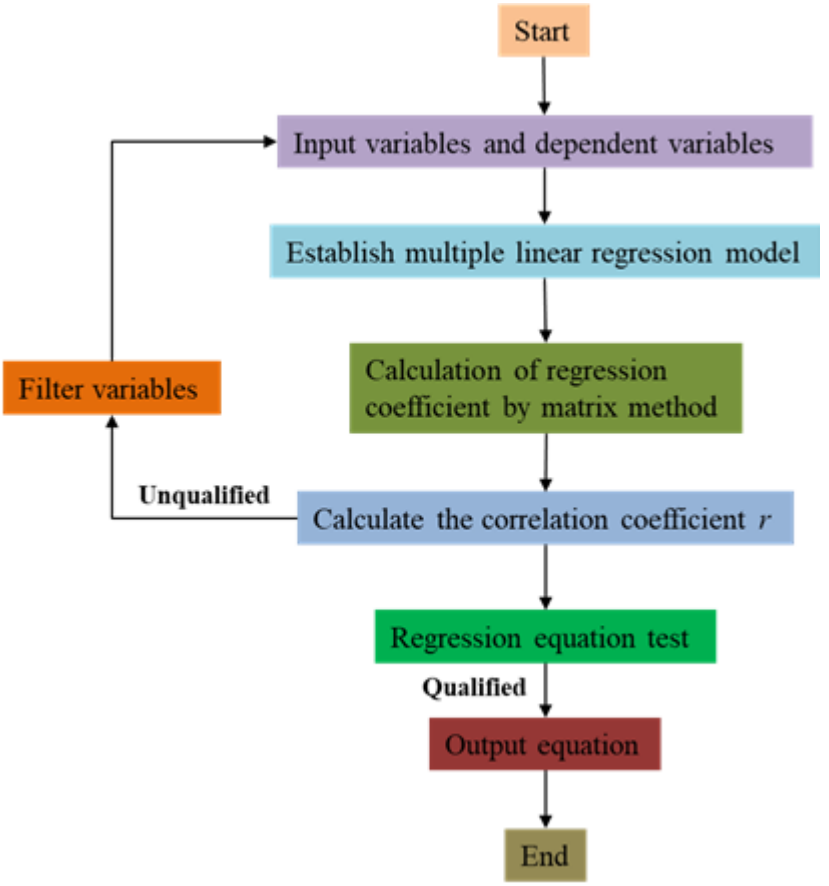
The degree of fit of linear regression models is often measured by calculating the complex correlation coefficient (also known as the *multiple correlation coefficient* or *determination coefficient* R). However, it should be noted that the range of values for R is from 0 to 1, rather than -1 to 1 (because R is always nonnegative). The closer the value of R is to 1, the stronger the linear relationship between the model and the actual observed values, indicating a higher degree of fit of the model.

$$y_{y12\text{-}k} = \sqrt{1 - \left(1 - r_{y1}^2\right) \ldots \left[1 - r_{yk12-(k-1)}^2\right]} \tag{3}$$

The interweaving of a large number of conditional variables will lead to the instability of the regression model. Therefore, it is necessary to test the significance of the multiple regression model.

$$F = \frac{\sum \left(y_1 - y_2\right)^2 / k}{\sum (y_1 - y_i)^2 / \left(n - k - 1\right)} \tag{4}$$

Figure 1. Flow chart of multi-variate linear analysis algorithm



In the *F*-test, *k* is the number of independent variables (excluding the intercept term), *n* is the sample size, and *n*-*k*-1 is the degree of freedom of the residual (or error term). This degree of freedom is used to calculate the denominator of the *F*-statistic, which is the mean squared error (MSE).

Backpropagation Neural Network Algorithm Optimization

In artificial neural networks, each neuron model plays a role similar to that of cell bodies in biological neurons. These models receive input signals from other neurons (usually represented as $x_1, x_2, \ldots, x_n$), and each input signal has an associated weight ($w_1, w_2, \ldots, w_n$). The weight value determines the degree to which the input signal affects the output of the neuron. The left side of a neuron is usually the weighted sum part, which calculates the sum of the products of all input signals and their corresponding weights to form a weighted sum (or net input).

$$\text{net}_i = \sum_{j=1}^{n} \omega_{ij} x_j - \theta \tag{5}$$

$$y = f(\text{net}_i) \tag{6}$$

In artificial neural networks, the interaction between input values x_i and weights w_{ij}, as well as offset values (θ), commonly represented as bias terms (b), are key to calculating the output of neurons. In order to efficiently process these calculations in big data platforms, we usually use matrix operations to simplify the process.

$$Y = f(XW) \tag{7}$$

Through the input and output matrix analysis, the data can be optimized by a neural network algorithm.

$$P_j = f\left(\sum_{i=1}^{n} w_{ij} x_i - c_j\right), j = 1, 2, \ldots, l \tag{8}$$

$$Q_m = f\left(\sum_{i=1}^{n} P_j v_{jk} - d_k\right), k = 1, 2, \ldots, m \tag{9}$$

In artificial neural networks, after calculating the Q value (usually referring to the output value or activation value of the neural network), we compare it with the expected output Y (also known as the *target value* or *label*) to calculate the error. This error value is usually used to adjust the weights of the network in order to reduce errors in subsequent iterations, a process known as backpropagation.

During the backpropagation process, errors need to propagate layer by layer from the output layer back to the input layer in order to update the weights of each neuron. To achieve this, we need to calculate the gradient (i.e., derivative) of the error for each weight. These gradients are then used to update weights according to a certain learning rate, such as gradient descent algorithms.

$$\delta_k = \frac{1}{2}\left(Y_k - Q_k\right)^2, k = 1, 2, \ldots, m \tag{10}$$

$$v_{jk} = \theta P_j \delta_k, j = 1, 2, \ldots, l, k = 1, 2, \ldots, m \tag{11}$$

The formula for modifying the weights of input layer and hidden layer is:

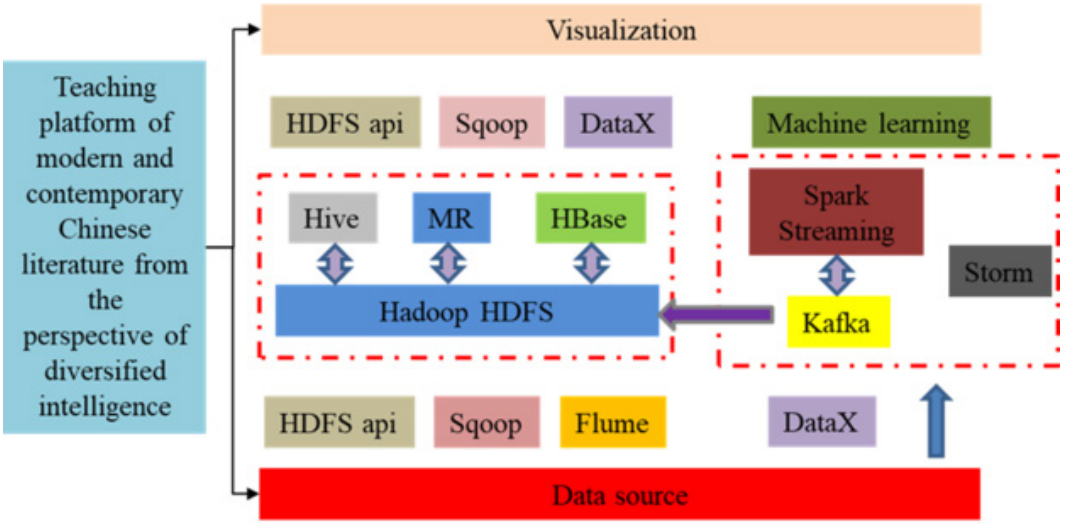
$$u_{ij} = \theta P_j\left(1 - P_j\right) x(i) \sum_{k=1}^{m} v_{jk} \delta_k, i = 1, 2, \ldots, n, j = 1, 2, \ldots, l, k = 1, 2, \ldots, m \tag{12}$$

For a given training sample, calculate the actual output of the network through forward propagation. This involves passing input data through each layer of the network and calculating the output of each neuron based on the current weights and thresholds. Next, compare the actual output with the expected output (i.e., target value or label) and calculate the error. This is usually achieved through loss functions such as MSE and cross-entropy. Then calculate gradients (i.e., derivatives) for each weight and threshold based on errors, which indicate how to adjust weights and thresholds to reduce errors. The backpropagation algorithm calculates these gradients through a chain rule.

Teaching Platform of Modern and Contemporary Chinese Literature From the Perspective of Diversified Intelligence

Based on the above analysis, the diversified intelligent vision threshold is optimized using the backpropagation (BP) neural network algorithm. Therefore, a distributed computing platform

Figure 2. Diagram of Chinese modern and contemporary literature teaching platform from the perspective of diversified intelligence



belonging to modern and contemporary Chinese literature can be built by the storage and computing capacity of the cluster and can be fully utilized to complete the collection, analysis, and processing of a large amount of data. The core of the teaching platform is the Hadoop distributed file system (HDFS), and it also includes the Yet Another Resource Negotiator (YARN) distributed resource management framework and distributed global data processing engine MapReduce, which can make the platform operate accurately and smoothly, as shown in Figure 2.

METHOD

Data Collection

The data for this study was gathered from multiple sources, including student feedback forms, observational studies, and interviews with educators. The research focused on comparing the teaching platforms of modern and contemporary literature across several cities, with a particular emphasis on the differences in engagement and satisfaction levels among students. The sample consisted of a diverse group of students from urban and rural settings, ensuring a broad representation of experiences.

Participants

The participants included 500 undergraduate students from five major cities, chosen to represent a wide range of socioeconomic backgrounds and educational experiences. The sample size was determined to be adequate for detecting significant differences in responses using statistical analysis.

Instruments and Tools

Data was collected using structured questionnaires and semi-structured interviews. The questionnaires were designed to measure student satisfaction, engagement, and perceived improvement in their abilities across various aspects of literature education, including reading comprehension, critical thinking, and creative expression. Interviews with educators provided insights into the challenges and successes experienced while implementing the new teaching platforms.

Procedures

Ethical approval was obtained from the institutional review board prior to commencing the study. Participants were informed about the purpose of the research and consented to participate. Data collection took place over six months, allowing for a longitudinal view of the impact of the teaching platforms.

Analysis Methods

Statistical analysis was performed using SPSS version 26. Descriptive statistics were used to summarize the data, and inferential statistics, specifically *t*-tests and analysis of variance (ANOVA), were used to compare means across different groups. *F*-tests and *R* were employed to evaluate the significance of the model and the strength of the relationships between variables, respectively, in predicting student outcomes based on the teaching platform variables.

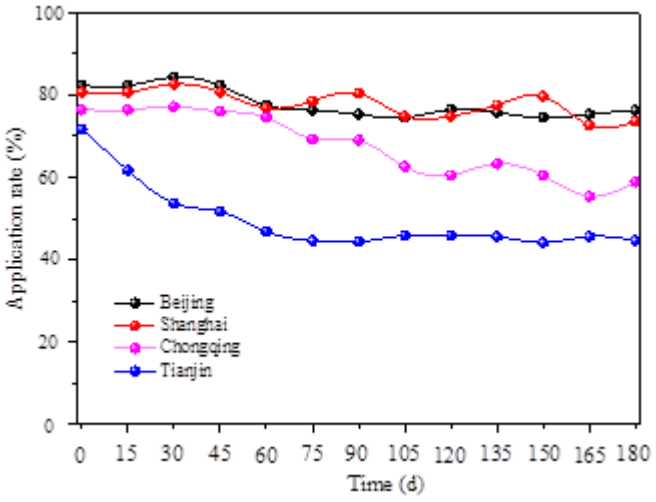
Application Cases of the Theory of Multiple Intelligence

The manuscript emphasizes the significance of optimizing teaching methods to foster multiple intelligences in students but could benefit from more concrete examples to illustrate practical implementation. The following are some additional specific examples of activities or projects that can be designed to stimulate various intelligences.

- **Linguistic intelligence:** For developing linguistic intelligence, activities such as debates, creative writing workshops, or storytelling sessions can be effective. Students could be encouraged to write reflective journals or essays that express their thoughts and feelings about a particular topic.
- **Logical-mathematical intelligence:** To enhance logical-mathematical intelligence, problem-solving activities like math puzzles, science experiments, or logic games can be used. Students could engage in designing and conducting their own experiments or solving real-world problems using mathematical concepts.
- **Spatial intelligence:** Activities that involve visual arts, such as drawing, painting, and sculpting, can help nurture spatial intelligence. Additionally, activities like map-making or architectural design projects can be beneficial.
- **Bodily-kinesthetic intelligence:** Physical activities like sports, dance, or hands-on science projects that involve movement and manipulation of materials can cater to bodily-kinesthetic intelligence. Students might participate in creating physical models or engaging in theatrical performances.
- **Musical intelligence:** Musical activities such as singing, composing music, or playing instruments can aid in developing musical intelligence. Students could be asked to create their own musical compositions or perform in front of their peers.
- **Interpersonal intelligence:** Collaborative projects that require teamwork and communication can improve interpersonal intelligence. Group projects can have students work together to solve a problem or complete a task.
- **Intrapersonal intelligence:** Activities that encourage self-reflection, meditation, or personal goal-setting can be used to develop intrapersonal intelligence. Students might keep a journal of their thoughts and feelings or engage in mindfulness exercises.
- **Naturalist intelligence:** Projects that involve nature, such as gardening, environmental conservation efforts, or wildlife observation, can support naturalist intelligence. Students could participate in field trips to natural settings or start a school garden project.

By incorporating these types of activities into the curriculum, teachers can address the diverse learning needs of students and promote a holistic educational experience. These examples can be adapted based on the specific goals of the educational program and the age group of the students.

Figure 3. Application rate of Chinese modern and contemporary literature teaching platforms in different cities from the perspective of diversified intelligence



ANALYSIS

Application Analysis

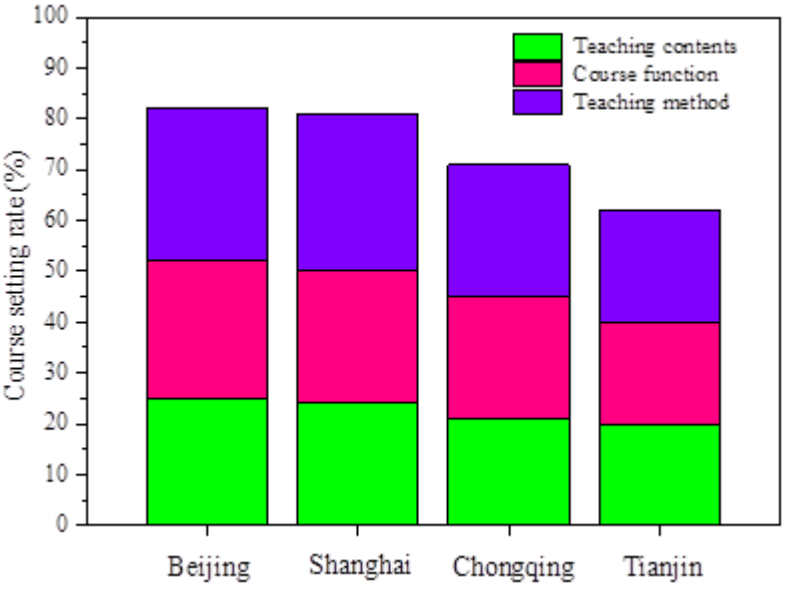
The educational goal of cultivating applied talents challenges traditional literature education. As far as Chinese literature is concerned, as a core course subordinate to the traditional basic discipline of Chinese language and literature, it has been committed to cultivating basic theoretical talents in teaching research for many years. We have always followed the path of "intellectualization" and "institutionalization" in literary education, paid attention to literary noumenon, and emphasized the systematic teaching of literary history knowledge. The teaching content emphasizes aesthetics and humanism, but the reality and practicality are obviously insufficient. This is a certain distance from the educational goal of cultivating applied talents. Highlighting and carrying forward the traditional advantages of Chinese disciplines and majors and realizing the adjustment and transformation of teaching ideas have become practical topics that need to be considered.

Figure 3 shows that with the increase of modern and contemporary literature teaching time, the application rate of Chinese modern and contemporary literature teaching platforms under the vision of diversified intelligence varies among different cities. Among them, Beijing and Shanghai have a high application rate for the teaching platform of Chinese modern and contemporary literature. Still, the changes in Beijing are relatively stable, while the fluctuations in Shanghai are relatively large. Chongqing takes the second place, and Tianjin has the lowest application rate, which shows a gradual downward trend. The reason may be that Beijing and Shanghai have better learning resources and teaching platforms for modern and contemporary literature. The cultural literacy between the two cities is high, while the cultural literacy of Chongqing is relatively poor, but the developed economy makes up for the application rate. Tianjin has the worst cultural literacy and comprehensive economic ability, which leads to the reduction of the application rate.

Curriculum Analysis

Because it will affect the study of people in different cities, understanding urban people is different. Therefore, we can grasp three key points about transforming the teaching concept of courses between different cities. First, in terms of teaching content, the literature has the reality and sense of the times that other courses do not have. Its teaching and research content is closely combined with the reality

Figure 4. Course-setting rate of Chinese modern and contemporary literature teaching platform in different cities from the perspective of diversified intelligence



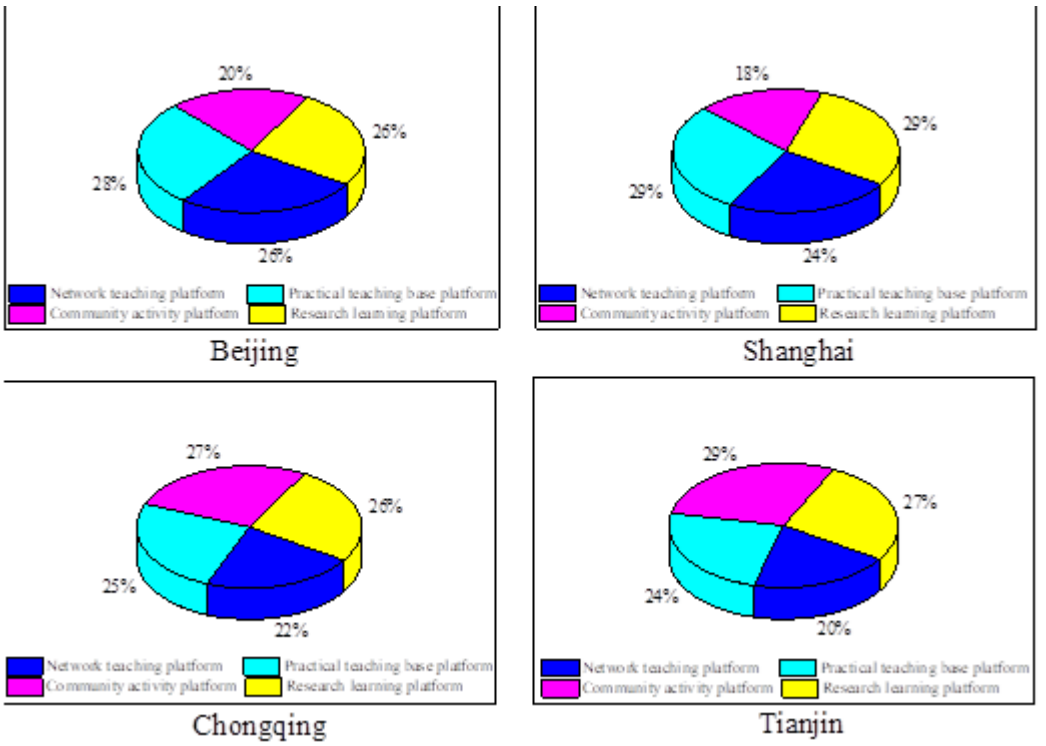
of society, politics, economy, and culture. It should fully highlight the characteristics of the course, its unique role, and its concept of practical care. Second, regarding the orientation of curriculum functions, we should face Chinese and non-Chinese majors, respectively. As professional courses and humanistic quality education courses for different students, in the process of student training, we must innovate the traditional academic talent training mode and pay attention to cultivating student abilities of literary reading, perception, imagination, understanding, appreciation, criticism and writing in knowledge construction and professional thinking training. Third, in terms of teaching methods, we advocate that problem awareness, participation awareness, and current awareness run through the process of curriculum teaching; Revise the teaching methods in literary education to move away from 'intellectualization,' 'institutionalization,' and the overemphasis on historical context at the expense of literary content. Shift the focus from simply imparting knowledge to fostering students' abilities, including their enthusiasm for autonomous learning, their capacity to apply what they learn, and their awareness of real-world issues.

Figure 4 shows that the proportions of teaching content, curriculum function, and teaching method are almost the same, and the content of each curriculum is also similar. The curriculum rate in Chongqing is lower than that in the above two cities but higher than that in Tianjin. The main reason for the above phenomenon may be that the humanistic quality and comprehensive ability of each city are different. As we all know, Beijing and Shanghai are the two most famous cities in China, and their economic level, science, and technology culture are the most developed. As a big city in Western China, Chongqing has the most significant population resources and area, providing a certain impetus in Chongqing. Tianjin's scientific and technological abilities and economic level are poor, so its teaching ability is poor, and it urgently needs improvement to a certain extent.

Classification of Platforms

Strengthening the teaching should be carried out in a multi-pronged and comprehensive manner to form a teaching system that conforms to the law of literature education and the training needs of applied talents, is centered on core courses, combines inside and outside the classroom, inside

Figure 5. Classification of Chinese modern and contemporary literature teaching platforms from the perspective of diversified intelligence between different cities



and outside the campus, combines traditional classroom teaching with modern online teaching, and expands and radiates layer by layer. As we all know, classroom learning is important for professional knowledge construction and ability training, which should be further consolidated. Based on the "application-oriented" orientation of talent training in local universities, we must change the teaching method of "intellectualization," "institutionalization," and "substituting history for literature" in literary education from emphasizing the teaching of literary trends to emphasizing the appreciation of literary works and from emphasizing the teaching of systematic knowledge to emphasizing the cultivation of professional ability and quality.

Figure 5 shows that the proportion of Beijing and Shanghai in the four teaching platforms is relatively average. Still, the proportion of community activity platforms is relatively low, which reflects the willingness of the two cities for the comprehensive development of Chinese literature. Hence, the modern and contemporary literature literacy between the two cities is relatively high. Chongqing and Tianjin focus more on community activity platforms, followed by research-based learning platforms. Cooperation can be strengthened between different cities to jointly build teaching platforms and share high-quality teaching resources and academic achievements. This can not only improve the quality and influence of teaching platforms but also promote cultural exchange and academic cooperation between different cities. We should formulate different teaching platforms according to local economic level and people's humanistic quality, to improve the development and progress of Chinese modern and contemporary literature.

Teaching Mode

The teaching platform can be divided into five-step linkage teaching mode of "reading, knowing, feeling, researching and writing." *Reading* refers to opening extracurricular reading books, and using network resources to read online, to broaden student reading ranges, guide students to form the habit of reading original works and classics, discover, perceive, understand, and appreciate the charm of literature, truly appreciate the beautiful feeling and profound wisdom from literary classics, and gradually enhance their aesthetic perception ability and modern humanistic quality. *Knowing* is the basic position of classroom teaching, and the construction of basic knowledge is the premise of ability improvement and quality training. In particular, Chinese majors need to complete the systematic study and macro grasp of literary history, literary phenomena, literary trends, writers, and works. *Feeling* is to use the practice base and community teaching platform to enhance intuitive student feelings and personal experience of literature and society through social investigation, field sampling, and community activities, effectively guide students to grasp the literary pulse of modern society, understand the essential relationship between social and economic development and literary reform, and cultivate the awareness of practical care in the process of literary learning.

Researching concerns not only the classroom learning platform but also the network learning platform and community learning platform used to carry out student awareness of problems. Students majoring in Chinese can receive preliminary scientific research training to develop their innovative literacy. This can be achieved by participating in scientific research groups, joining teachers' research projects, or applying for innovative projects. *Writing* means that in the first classroom teaching, teachers arrange reading reports, literary creation, literary comments and academic paper writing exercises in a planned and purposeful way. In addition, they also urge students to write frequently by establishing student journals, participating in literary community activities, and writing competitions, to improve their literary appreciation, criticism, and creative ability in writing, which is the key stage of ability formation.

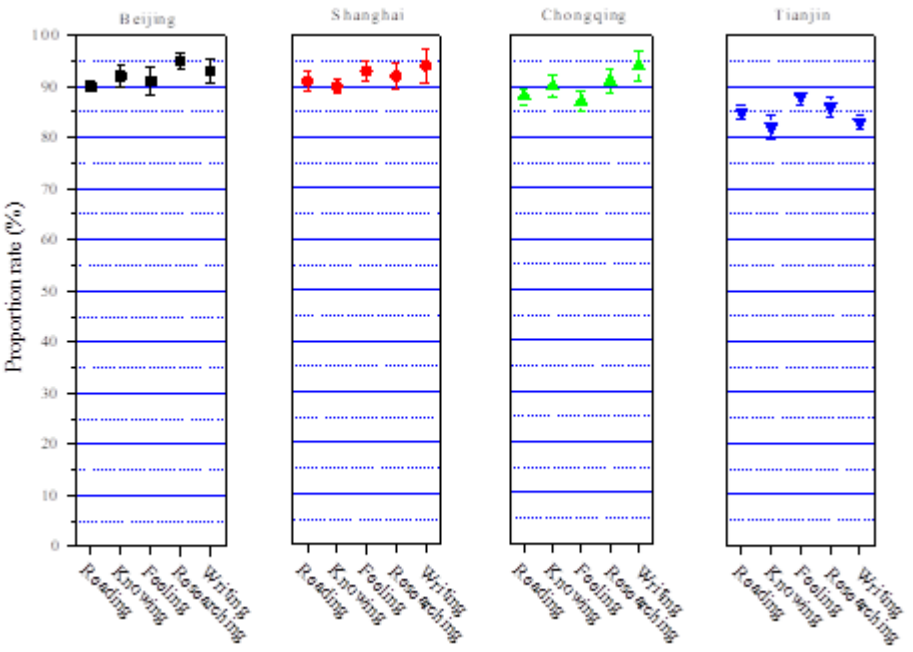
Figure 6 shows that when the five-step linkage teaching mode of "reading, knowing, feeling, researching, and writing" is adopted, the proportion of these five teaching modes in Beijing and Shanghai is higher than 90%. Chongqing takes second place, and the teaching mode of "writing" accounts for the highest proportion, while the proportion of "feeling" is the lowest. Compared with the above three cities, the five teaching modes of "reading, knowing, feeling, researching, and writing" in Tianjin are relatively low, which is mainly related to the local economic level. Tianjin's economic level and scientific and technological ability are low among the four cities, and people's humanistic qualities are also undeveloped, leading to the low proportion of the five teaching modes. In short, we should formulate corresponding teaching platforms according to the development of Chinese literature in each city, to improve the development and progress of modern and contemporary literature among cities.

Satisfaction Analysis

College teachers should recognize the importance of diversified and intelligent teaching methods. They should formulate scientific and reasonable plans for diversified and intelligent teaching, optimize their teaching methods during the teaching process, and improve the diversified and intelligent classroom teaching mode. Teachers should consciously and effectively cultivate and guide students, promoting their personality development and autonomous learning ability. Additionally, teachers should cultivate their own psychological qualities, such as being active, serious, united, cooperative, self-confident, and dedicated.

Figure 7 shows that people in different cities are different in their satisfaction with the teaching platform of diversified intelligence. Among them, people in Shanghai and Beijing are the most satisfied with the platform, but the satisfaction of Beijing fluctuates greatly, while Shanghai is relatively flat. Satisfaction in Chongqing with the teaching platform is second, and the fluctuation range is small. People in Tianjin are the least satisfied with the teaching platform, and the fluctuation range is also

Figure 6. Proportion rate of teaching modes in the teaching platform of modern and contemporary Chinese literature from the perspective of diversified intelligence



the largest. The main reason may be closely related to the local economic development level and scientific, technological, and cultural capacity. The economic development level of Shanghai, Beijing, and Chongqing is better than …modern and contemporary literature teaching platforms. In order to better improve satisfaction with the teaching platform between cities, we should provide learning guidance to the residents of each city to improve their humanistic literacy ability.

APPLICATION AND INTERPRETATION OF STATISTICAL ANALYSES

The manuscript highlights the importance of statistical measures such as *R* and *F*-tests in evaluating the fit and significance of regression models. The following elaboration clarifies how these measures were utilized and what specific conclusions were drawn from the analysis.

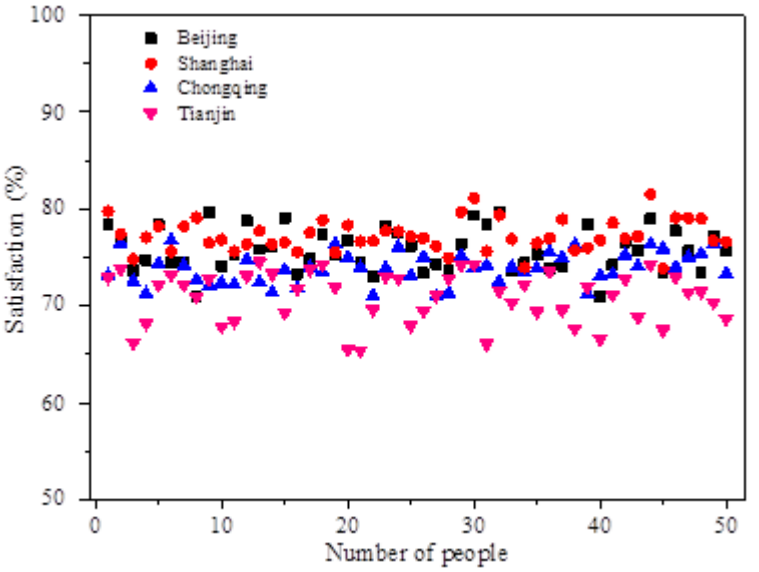
Correlation Coefficient

The value of *R* was calculated to measure the degree of fit of the linear regression models. A high *R*-value, close to 1, indicated a strong linear relationship between the model predictions and the actual observed values. This suggests that the model was a good fit for the data collected. The *R*-value was interpreted as the proportion of variance in the dependent variable that is predictable from the independent variable(s).

F-Test Significance

An *F*-test was conducted to assess the overall significance of the regression model. The *F*-test evaluates whether at least one of the independent variables (excluding the intercept term) contributes significantly to predicting the dependent variable. The *F*-statistic was calculated using the degrees of freedom for the model and the residual (n-k-1), where n is the sample size and k is the number

Figure 7. Satisfaction with the teaching platform of modern and contemporary Chinese literature from the perspective of diversified intelligence between different cities



of independent variables. A significant *F*-statistic led to the conclusion that the model explained a significant amount of the variability in the data.

Specific Conclusions Drawn

Based on the statistical analyses, several specific conclusions were drawn regarding the effectiveness of the teaching platform across different cities. Cities with higher levels of economic development and cultural engagement, such as Shanghai and Beijing, showed greater satisfaction with the teaching platform compared to other cities. This was attributed to the higher levels of technological and cultural resources available in these cities, which contributed to a more enriching learning environment. The analysis also highlighted the need for tailored learning guidance and improved humanistic literacy abilities in cities with lower satisfaction levels. Recommendations include providing city-specific learning support and resources to enhance the quality and relevance of the teaching platform.

FINDINGS AND DISCUSSION

Presentation of Results

Results indicated a significant difference in student satisfaction and engagement levels between cities with higher levels of economic development and those with less developed economies. Cities like Shanghai and Beijing, which boast advanced technological and cultural resources, demonstrated greater satisfaction with the teaching platform.

Interpretation

The high *R*-value, close to 1, suggested a strong linear relationship between the use of the teaching platform and improved student outcomes, indicating that the model fit the data well. The *F*-test confirmed the overall significance of the regression model, suggesting that at least one of

the independent variables contributed significantly to predicting the dependent variable (student satisfaction).

Implications

These findings underscore the importance of tailoring educational resources to meet the specific needs of different regions. In cities with robust technological infrastructure, the teaching platform can leverage these resources to create a more enriching learning experience. Conversely, in less developed areas, there is a need for additional support and resources to ensure that all students can benefit equally from the teaching platform.

Limitations

While the study provides valuable insights, it is limited by the self-reported nature of the data and the cross-sectional design, which does not allow for causal inference. Future research could employ experimental designs or longitudinal studies to explore further the long-term effects of the teaching platforms on student outcomes.

Future Research

Further research could investigate the impact of integrating more interactive and innovative teaching methodologies, particularly in less economically developed regions. Additionally, exploring the role of cultural engagement and technological resources in enhancing the effectiveness of teaching platforms could yield valuable information for educators and policymakers. By providing a thorough discussion of the findings, the research not only contributes to the existing body of knowledge but also offers actionable insights for practitioners looking to improve the educational experience for students.

CONCLUSION

By analyzing the issues in Chinese literature in depth, this paper discusses the functional principles and optimization methods based on the theory of multiple intelligences. Drawing on the development direction of Chinese modern and contemporary literature, this paper establishes a teaching platform for literature from a multi-dimensional intelligence perspective. This teaching platform is then applied to the study of literature across different cities, examining both the applications and existing challenges of modern and contemporary literature teaching platforms.

The study found significant differences in student satisfaction and engagement levels between cities with higher levels of economic development and those with less developed economies. Cities like Shanghai and Beijing, which possess advanced technological and cultural resources, showed greater satisfaction with the teaching platform. These findings highlight the importance of tailoring educational resources to meet the specific needs of different regions. The teaching platform leverages these resources in cities with robust technological infrastructure to create a more enriching learning experience. Conversely, in less developed areas, additional support and resources are needed to ensure all students can benefit equally from the teaching platform.

Despite the valuable insights the study provides, it is limited by the self-reported nature of the data and the cross-sectional design, which does not allow for causal inference. Future research could benefit from employing experimental designs or longitudinal studies to explore further the long-term effects of teaching platforms on student outcomes. Additionally, investigating the impact of integrating more interactive and innovative teaching methodologies, particularly in less economically developed regions, could yield valuable information for educators and policymakers.

By providing a detailed discussion of the findings, this research not only contributes to the existing body of knowledge but also offers actionable insights for practitioners seeking to improve the educational experience for students. The paper thus supports the ongoing development and

progress of Chinese literature, providing a reference and platform application support that is positively significant for the field.

DATA AVAILABILITY

The figures used to support the findings of this study are included in the article.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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