A Positive Influence of the Media Environment on the Teaching Effect of University Research

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Abstract

Neil Postman's trilogy "Entertaining to Death", "Technology Monopoly", "The Disappearance of Childhood" and his research works, his educational views are summarized as follows: "Education using media means cannot escape the superficial entertainment. Therefore, it cannot replace the traditional educational process." Combing the existing literature research results, constructing a theoretical model of the media environment and the teaching effect of universities, and discussing the main variables that positively affect the teaching effect of universities in the media environment are Media literacy for university educators. Using the method of empirical research, collecting sample data through a questionnaire survey, and then conducting data analysis such as structural equation modeling, the following conclusions are drawn: First, the media environment has a positive impact on the teaching effect of universities. Second, teachers' media literacy plays a partial mediating role in the relationship between the media environment and students' motivation to choose media. Third, the media literacy of university teachers has a positive moderating effect on the teaching effect of universities. The conclusions of this study enrich the relevant theories about the media literacy research of university teachers in the media environment, expand the interaction between students' choice of media motivation and university teaching effects, and provide theoretical guidance for the media environment in university teaching. On the one hand, it promotes the media environment. On the other hand, can help students use the media to obtain positive guidance for knowledge, thereby purifying university education and mutual sustainable development under the development of media technology.

Keywords: Neil Postman, Media Environment, Teachers' Media Literacy, Teaching Effect in Universities

1. Introduction

Neil Postman once pointed out in "Entertainment to Death" that "education is the origin of culture", and the influence and connection of media on education have always been inextricably linked. With the continuous advancement of science and technology, the form of media has entered an unprecedented multi-dimensional ecological era, and the education of teaching effects in universities has also been involved in such a torrent that is closely related to the post-mass communication era along with the advancement of science and technology. The technological reform of the media should promote educational innovation, diversification of the cultural environment, and short-distance communication. However, media technology has greatly promoted the generalization of the entertainment industry but narrowed the substantive significance of education. "Shallow

thinking" is prevalent, and " teat fun" is the current mainstream media ecological environment. This phenomenon undoubtedly affects the process of university students' education.

According to a professor at the distance education center of Athabas CTML University in Canada and a university of Terry Anderson, more than 90% of Chinese students in global universities still use social software to communicate. Education-related institutions are also eager for students to rapidly expand their international influence in this social networking world. The lower-grade students majoring in media also hope to learn the application of various social media platforms and the theoretical knowledge of communication. For example, they can exercise and improve their communication skills through information sharing and communication functions. For relevant researchers themselves, social media can also create good conditions for them to improve the professional quality of other professionals. Professor Paul Evans, a senior lecturer at the School of Education, University of South Wales, Australia, believes that due to the different learning modes and teaching environments between different history disciplines, history teachers and geographical science teachers have different curriculum practices. The use of social media tools should also have different emphases. The social media platform is rapidly developing based on the commercial operation platform, but the fundamental purpose of creating it is not just for the global education field.

1.1 Background and Importance of the Problem

At present, the overall structure of the applied quantity of educational communication studies in Chinese universities is in a good trend of rapid rise and stability, and China's scholars participating in related research topics in this field have increased. The originality and scope of its research are constantly expanding and expanding, the depth of the research scope is increasing, and the number of fruitful research is gradually increasing. But at the same time, there are still several problems in the theoretical research of Chinese higher education and communication:

(1). The construction of the theoretical system is lagging, the continuity of research on theoretical issues is not strong, the theoretical guidance is weak, and the foundation for strong support for the research of this discipline has not yet been fully formed.

(2). In modern communication, some theories and compilations, and publications in the field of contemporary pedagogy have stagnated. At present, the educational circles in universities are beginning to pay attention to communication, but there is still insufficient research on the frontier issues of educational communication.

1.2 Research Question

This study is that based on the reconstruction of the social concepts and learning atmosphere of educators, educated people, and education management professionals in the public communication environment of knowledge media, that is, educational information media, it researches and demonstrates the knowledge teachers, recipients, and teachers. Attitudes and behaviors of managers of educational environments about media use and knowledge continuation.

1.3 Research Objective

The purpose of studying the current media environment for educators and the educated is to get rid of the instigation of the media so that the educated can start to reflect on the "banality evil" hidden in human thinking; at the same time, coexist with the technology and platform of the current

era, and even enable educators and educated people to benefit from the convenience of widely using media technology to inherit and think about culture. Therefore, the purpose of this study is that educators' media literacy positively affects the effect of education in the media environment.

2. Literature Review

2.1 Related Concepts and Theories

2.1.1 Media Environment

Neil Postman pointed out in his book "The Disappearance of Childhood", "The impact of media communication on all dimensions of the educational environment is far-reaching." At the same time, teachers and students are end users of communication behaviors, and they also do the "factory" produced for the social talent market and respond quickly and directly to the media environment.

2.1.2 Teaching Effect of Universities

Under the rapid development of the information technology industry in recent years and the support and encouragement of various educational support policies, the modern teaching evaluation mode, which uses modern information media teaching methods as the leading mode, has achieved relatively high-speed development in a short period, but there are still a series of problems that affect the cognitive level of many students and improve the actual teaching effect. Therefore, at present, media information technology and internet technology have broken the situation of single use of educational media technology, open source information, and essential changes in the process of teaching communication have once again challenged the situation of educational media technology. Facing the complex and changeable media environment, rethinking it is of great significance to study the teaching effect of universities.

2.1.3 Teachers' Media Literacy in Universities

In Neil Postman's "Entertainment to Death", he put forward the concept of media literacy, which is embodied in the fact that if university students feel that the media's performance of educational functions is indeed for public welfare, environmental protection, and caring for vulnerable groups, university students are likely to be There will be recognition of such media environmental activities and an increase in willingness to use them. On the contrary, if university students feel that the educational function of the media is only for sales promotion, show off, advertising, relationship building, etc., likely, university students will not agree with such media environmental activities, and it will not bring about an increase in their willingness to use. Based on the above analysis, this study puts forward the following research hypotheses:

2.2 Literature Surveys

2.2.1 Media Environment

Dewey, J. (1974) advocated in "the reverse effect of communication and education" (p. 112-113) that "through education, citizens can be equipped with rational judgments and identify propaganda and facts, to achieve true spiritual freedom and intelligence. In the media environment, there are students, educators, and education managers (education system practitioners), so the media faces this group of "customers" with special identities, and through content selection, secondary

communication, emotional dependence, media selection, and other ways to reflect whether it has the value of the educational function. As a medium, the special and one-way communication to university teachers is not only to provide teaching technology, means of communication, intellectual content, or interactive use but also to undertake the corresponding social talent training responsibility, which is the education mentioned above function.

Teacher groups, as the research object of social sciences, Lasswell, one of the four founders of mass communication scholars, mentioned "communication" in his doctoral dissertation "Propaganda Techniques in World Wars", how communicators use its phenomenon to achieve results, from the perspective of "communication form to control its opinion" Zhao, H. (2015). The traditional cognition of university teachers on the media is produced by the gradual development and application of the media, such as Internet technology, media use, and other concepts. And exist as a series of interrelated media characteristics (such as culture, atmosphere, skills, values, competitive position, digital media supply, etc.) or media models. The perception of the media environment provides traditional university teachers with insight into media's "value "system", "soul" and "characteristics", which determines when traditional university teachers choose media for teaching, in addition to comparing and choosing the digital media or services provided by the media, they will also compare the digital media or services provided by the media. The performance of the media in undertaking educational functions is taken as the basis for consideration.

Murray & Vogel (1997) have confirmed through research that "traditional university teachers perceive that the behavior of a certain medium to undertake educational functions will increase the willingness of university students to choose the content of the medium. Buchanan, T., & Ess, C. (Eds.). (2008).." In a survey in 1999, Cook, S. W., & Duffy, T. M. (2013). Even if the dissemination of content is done well enough in other aspects, the support of university students for it will also decline." Research on relevant domestic literature has confirmed the educational function of the media. Behavior has a positive impact on university students' willingness to use. Comparing the views of these scholars comprehensively, combined with the classic four-level dimension division of the media environment in the theoretical circles, the author intends to examine the effect of the media environment on university education and teaching from three dimensions: the function of media education, the application of interactive media teaching, and the development of media information technology.

2.2.2 University Students' Choice of Media Motivation

Liu Y.F. (2010)'s research shows that "individual differences of attribution subjects, mainly their knowledge structure, concept attitude, psychological characteristics, and other factors will have an impact on the attribution process". Another study in social psychology found that people tend to define their beliefs, attitudes, or behaviors as typical, meaning that they perceive other people to be consistent with them when they are in the same situation as their response, which is known as the spurious consistency variable (Ross, 1977). Using the individual characteristics of university students' attribution, many studies have shown that university students' trust does play an important role in the process of media environment attribution and university teaching effects (Webb, 2008; Herpen, 2016). It is shown that when the attribution of media environment and media behavior motivation is judged to be good, university students have a high degree of trust, and their media performance of educational functions is a manifestation of the strength of the media. Such media are more capable of providing Good knowledge and services in the field of education, so it has a certain impact on improving the teaching effect of universities; and the media with the low trust of university students, the performance of educational functions is in a downward trend, which is a derogation of the strength of the media, which makes The ability of the medium to provide good

services has declined, thus reducing the effectiveness of teaching in universities.
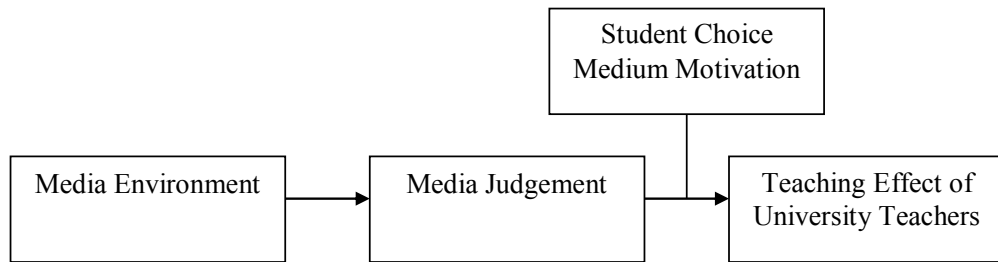
2.3 Conceptual Framework

Figure 1 Theoretical Hypothetical Model

2.4 Research Hypothesis

H1: The media environment has a positive impact on the teaching effect of universities.

H1a: The functional behavior of media education can positively affect the development of teaching effects in universities.

H1b: The application form of interactive media teaching can positively develop the teaching effect of universities.

H1c: The development of media information technology can positively develop the teaching effect of universities.

H2: The media environment has a positive impact on the literacy of university teachers.

H2a: The ability to judge the media environment can positively affect the quality of university teachers.

H2b: The ability to search for information on the Internet can positively affect the quality of university teachers.

H2c: The combination ability of traditional teaching and digital information technology can positively develop the teaching effect of universities.

H3: The degree of media literacy of university teachers and the teaching effect of universities play a mediating role.

H4: University students' media literacy can positively adjust the relationship between teachers' media literacy and university teaching effectiveness.

3. Research Methodology

3.1 Research Design

This study adopts empirical research, adopts the method of a questionnaire survey.

3.2 Population and Sample

The population and sample of the presented study are university students.

3.3 Research Instruments

A questionnaire is distributed, under the method that is standardization and low cost, and the controllability is stronger than the interview method.

3.4 Data Collection

This research study collects sample data designs measurement scale to form a questionnaire, distributes and collects through online and offline methods to obtain the sample data required for research, and then collects sample data later.

3.5 Statistics Used for Data Analysis

The study carries out inspection and correlation analysis on sample data. In addition to descriptive statistical analysis, the focus is on fitting and goodness-of-fit testing of theoretical models through structural equation modeling methods.

4. Data Analysis and Findings

4.1 Introduction

This study mainly uses SPSS 20 and AMOS 23.0 software. To verify the theoretical model of the relationship between the media environment and the teaching effect of universities. To this end, it is necessary to evaluate the quality of the data obtained from the questionnaire survey, and then conduct descriptive statistical analysis and related factor analysis on the samples. On this basis, through the structural equation model analysis to fit and optimize the construction model of the influence of the media environment on the teaching effect of universities, the structural equation model is used to test the research hypothesis of the influence of the media environment on the teaching effect of universities. Finally, the mediating effect of university teachers' media literacy attribution and the moderating effect of university student's choice of media are verified and analyzed respectively.

4.2 Data Analysis of the Quantitative Data

Table 1 Reliability Evaluation Form for Variables in Formal Questionnaire

Feature Dimension Variable	Items	Scale Mean with Term Removed	Scale Variance with Term Removed	CITC	The Cronbach's Alpha Value of the Deleted Item	Cronbach Alpha
Media Function	CSR1	11.51	5.255	.740	.847	.881
	CSR2	11.67	5.562	.661	.878	
	CSR3	11.62	5.213	.787	.829	
	CSR4	11.65	5.244	.780	.832	
Interactive Media Teaching Form	CSR5	11.58	5.001	.742	.825	.870
	CSR6	11.72	4.924	.753	.821	
	CSR7	11.54	5.222	.772	.815	
	CSR8	11.70	5.503	.628	.870	
Media Information Technology Development	CSR9	7.68	2.187	.747	.739	.842
	CSR10	7.63	2.235	.720	.767	
	CSR11	7.66	2.533	.656	.827	
Society Responsibility	CA1	7.31	2.665	.807	.823	.890
	CA2	7.23	2.843	.801	.830	
	CA3	7.14	2.847	.748	.876	
Teacher Media Literacy	CAT1	12.93	4.836	.696	.851	.874
	CAT2	12.72	4.642	.805	.810	
	CAT3	12.69	4.505	.765	.824	
	CAT4	12.75	4.831	.658	.867	
Moderator Variable of Students' Choice of Media Motivation	CC1	18.75	63.552	.870	.958	.964
	CC2	18.65	65.655	.781	.964	
	CC3	18.70	64.817	.865	.959	
	CC4	18.78	63.138	.896	.957	
	CC5	18.84	62.843	.921	.955	
	CC6	18.64	64.614	.844	.960	
	CC7	18.63	65.347	.849	.960	
	CC8	18.73	63.727	.853	.960	
University Teaching Effect Support	CS1	16.14	9.427	.648	.836	.858
	CS2	16.30	9.177	.720	.816	
	CS3	15.93	9.640	.728	.816	
	CS4	15.97	9.702	.609	.846	
	CS5	16.19	9.652	.674	.828	
Teaching Effect of Universities	PI1	11.61	4.749	.726	.885	.898
	PI2	11.68	4.635	.751	.876	
	PI3	11.65	4.744	.798	.859	
	PI4	11.63	4.533	.817	.851	

Table 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.944
Bartlett's Test for Sphericity	**Approximate Chi-Square**	14772.778
	Degrees of Freedom (df)	741
	Significance (Sig.)	.000

4.2.1 Model Fitting and Hypothesis Testing

In this study, AMOS 23.0 software is used to analyze the structural equation of the theoretical model of the relationship between the media environment and the teaching effect of universities. The first step is to draw the structural equation model for structural equation model analysis, and evaluate the structural equation model based on the model fitting index, and then conduct path analysis and hypothesis testing for the theoretical model of this study through the structural equation model analysis method. First test the main effect of the model, then use the Bootstrap method to test the mediation effect, and finally test the moderating effect in the model by the significance test method of the interaction variable.

4.2.2 Structural Equation Modeling

The theoretical model constructed in this paper includes six latent variables, which are the function of media education, the form of interactive media teaching, social responsibility, the development of media information technology, teachers' media literacy, and the effect of teaching in universities. The form of media-like teaching, social responsibility, and the development of media information technology have a direct impact on the media environment, and the media environment has a direct impact on the teaching effect of universities. Next, the AMOS23.0 software will be used to test the research hypothesis and verify the theoretical model. In the structural equation model, according to Wu M.L's point of view, the two potential variables of the media environment and the teaching effect of universities are respectively added to the residual items ER1 and ER2 (Fig2).
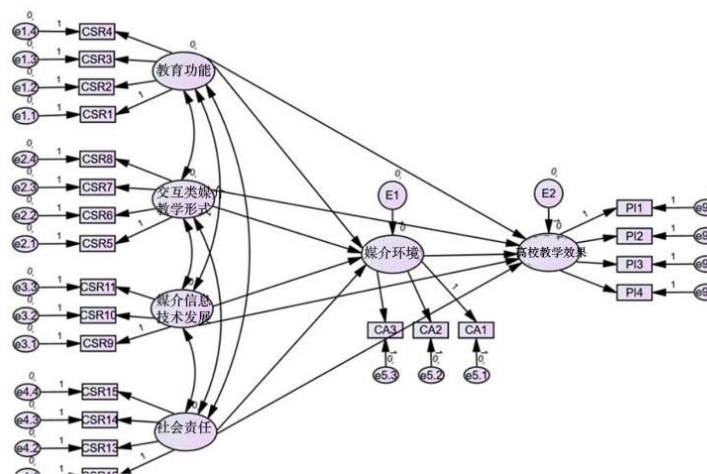

Figure 1 AMOS Model Fitting Graph

4.2.3 Model Goodness of Fit Test

Using AMOS 23.0 software to analyze the model, it is found that all parameters of the model meet the requirements, and the standardized results are shown in Figure 3.
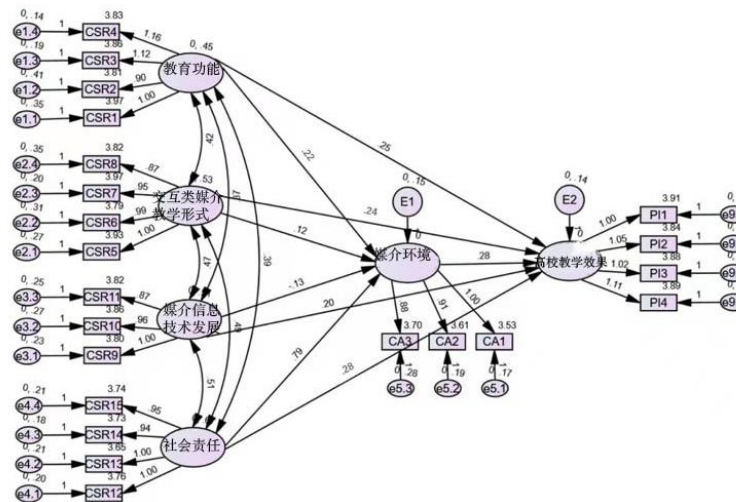

Figure 2 AMOS Model Factor Loading Plot

According to the convention, the indicators used to evaluate the model in this study are parsimony fit index χ²/df, absolute fit index RMSEA value, GFI value, AGFI value, value-added fit index NFI, CFI and other indicators. The model fitting index results are shown in Table 3 shown as follows:

Table 3 Model Fit Index Results

Statistical Test Volume	Fitting Criteria or Thresholds	Test Result Data	Model Fit Judgment
Absolute Fitness Index			
RMSEA Value	≤0.08	0.078	Acceptable
GFI Value	≥0.80	0.864	Acceptable
AGFI Value	≥0.80	0.827	Acceptable
Value-Added Fitness Index			
NFI Value	≥0.80	0.905	Acceptable
CFI Value	≥0.90	0.937	Acceptable
Parsimony Fitness Index			
χ²/df	≤5	3.474	Acceptable

It can be seen from Table 3 that all model fitting indices are in line with the relevant standards, indicating that the data obtained from the formal questionnaire survey are compatible with the structural equation model. On this basis, the next step of research hypothesis testing can be carried out. AMOS 23.0 software was used to check the path relationship in the structural equation model, and the results are shown in Table 4.

Table 4 Structural Equation Model Test Results

Path Relationship	Estimate	S.E	C.R	P
Teaching effect in universities ← Function of Media Education	0.220	0.094	2.350	0.019
Teaching Effect in Universities ← Interactive Media Teaching Forms	0.123	0.103	1.803	0.022
University Teaching Effect ← Social Responsibility	-0.128	0.172	-0.743	0.458
Teaching effect in universities ← Development of Media Information Technology	0.791	0.091	8.712	***
Teacher Media Literacy ← Media Environment	0.283	0.078	3.623	0.005
Teacher Media Literacy ← Functions of Media Education	0.254	0.090	2.833	***
Teacher Media Literacy ← Interactive Media Teaching Forms	0.243	0.157	2.710	0.023
Teacher Media Literacy ← Social Responsibility	0.202	0.152	2.326	0.038
Teacher Media Literacy ← Media Information Technology Development	0.278	0.082	3.112	***

In this article, **$P<0.01$, *** means the effect is significant, and $P<0.05$ is an acceptable significant value

As shown in Table 4, the P value of the path of teachers' media literacy ← social responsibility is 0.458, which fails the significance test. Teachers' media literacy ← media information technology development, and university teaching effect ← teachers' media literacy and teachers' media literacy ← media information technology development are significant at the 0.001 level, and the rest of the paths are significant at the 0.05 level. The significance of the impact of this paper is shown in the results of the structural equation model in Table 5:

Table 5 Structural Equation Modeling Results

Path Relationship	P	Results
Teaching Effect in Universities ← Function of Media Education	0.019	Accept
Teaching Effect in Universities ← Interactive Media Teaching Forms	0.022	Accept
Teaching Effect in Universities ← Social Responsibility	0.458	Do Not Accept
Teacher Media Literacy ← Media Information Technology Development	***	Accept
Teacher Media Literacy ← Teacher Media Literacy	***	Accept
Teacher Media Literacy ← Functions of Media Education	0.005	Accept
Teacher Media Literacy ← Interactive Media Teaching Forms	0.023	Accept
Teacher Media Literacy ← Social Responsibility	0.038	Accept
Teacher Media Literacy ← Media Information Technology Development	***	Accept

Table 6 summarizes the test results of relevant research hypotheses on the relationship between the media environment and the teaching effect of universities.

Table 6 Hypothesis Verification Results of the Media Environment and Teaching Effect of Universities

No.	Hypothetical Content	Results
H1a	The functional behavior of media education can positively affect the development of teaching effects in universities	Support
H1b	The application form of interactive media teaching can positively develop the teaching effect of universities	Support
H1c	The development of media information technology can positively develop the teaching effect of universities	Support
H1d	The development behavior of media information technology can positively affect the teaching effect of universities.	Support
H2a	The ability to judge the media environment can positively affect the quality of university teachers	Support
H2b	The ability to search information on the Internet can positively affect the quality of university teachers.	Support
H2c	The combination of traditional teaching and digital information technology can positively develop the teaching effect of universities.	Not Support
H2d	Media information technology development behavior can positively affect teachers' media literacy.	Support
H3	The media literacy of university teachers can positively affect the teaching effect of universities.	Support

It can be seen from Table 6 that among the research hypotheses related to the relationship between the media environment and the teaching effect of universities, the test results do not support the H2c hypothesis, while other hypotheses are supported. Moreover, it can also be seen from the size and positive or negative of the regression coefficient that the development of media information technology has the greatest impact on the teaching effect of universities and teachers' media literacy. The supported hypotheses in the table all show that this impact is positive or positive obviously.

4.3 Summary of the Results

The above results show that the media environment significantly impacts the teaching effect of universities. In addition to the development of media information technology, the media education function and interactive media teaching form are also important to influence teachers' media literacy paths. In addition, teachers' media literacy also plays an important role in the path of influence on the teaching effect of universities.

5. Conclusion, Discussion, and Recommendation

5.1 Conclusion

According to Bollen (2000), the evaluation of the measurement model can adopt the method of sub-modules for matching tests. In this study, the media environment is a multi-dimensional variable with four dimensions (media education function, interactive media teaching form, social responsibility, and media information technology development) to be tested separately.

5.2 Discussion

First, Analyze the sample data obtained from the questionnaire survey to assess the data quality. After validity and reliability testing, exploratory factor analysis, and correlation analysis, it can be seen that the measurement of variables has good reliability and validity, and the quality of the data is up to standard, which can be used for further theoretical research.

Second, Confirmatory factor analysis was performed on the structural equation model using AMOS 23.0 software. Found that the variables in the model are divided into three parts, which are the media environment, individual theoretical characteristics of university teaching effects, and university teaching affect responses It can be seen that the structural equation models of the three parts have good convergent validity and discriminant validity.

Third, Use AMOS 23.0 software to draw and establish the structural equation model of the theoretical model of the relationship between the media environment and the teaching effect of universities, and carry out the analysis of the structural equation model; then, evaluate based on the fitting index of the structural equation model

5.3 Recommendation

After discussing Neil Postman's communication and pedagogy theory on media and teaching effects, discussing in-depth in combination with China's research status and researches its influence. The analysis conclusion reflects that the application, development, and innovation of media technology, and the use of media technology to popularize education are the inevitable historical results of the development and transformation of educational information technology and the interaction of scientific and technological teaching progress in universities, also the further reform and deepening of modern education. Cultivating teachers should have relatively sound and perfect teaching media literacy, integrated use of information technology, innovative ideas, attitudes, and research capabilities in educational innovation content means and teaching methods. Based on the overall learning psychology of Chinese students, it fully meets the individual needs of students. The pursuit of learning behavior, strengthening the development of student's interests, and the overall efficiency of school education is a truly meaningful teaching reform.

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