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Research Article

Influencing Factors of Microlecture on the Teaching Effect of Ideological and Political Courses in Colleges

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Microlecture has the characteristics of single topic, easy to learn, convenient sharing, and real-time interaction. Whether these characteristics are conducive to enhancing the effect of ideological and political teaching in colleges is the focus of this paper. We have constructed the influence factor model of microlecture on ideological and political teaching effect in colleges. Through questionnaire survey and empirical analysis, we verify the four characteristics of microlecture. The results show that in microlecture teaching, single topic, easy to learn, and sharing convenience are the main factors to enhance the teaching effect of ideological and political course in colleges, while real-time interaction had no significant effect. Our study has enriched the literature of microlecture in ideological and political teaching and confirmed that microlecture can improve the teaching effect of ideological and political courses in colleges. Based on the research results, we propose the following recommendations: (1) in ideological and political teaching, recorded microlecture should concentrate on a single topic as far as possible, and the time of microlecture should be controlled to be shorter; (2) since students believe that microlecture make their study easier and share convenience, universities should consider promoting this mode in ideological and political teaching.

1. Introduction

Along with the practice and application of flipped classrooms in colleges and universities [1, 2], a more novel teaching method, namely, microlecture [3], appears in students' daily learning. Generally speaking, microlecture refers to the use of a short recording or video (usually within 3 minutes) to state a single, strictly defined topic [4]. Microlecture usually consists of lectures or presentations, narration slides, or screen playback with narration [5]. Due to the characteristics of the microlecture, such as short, clear themes, and adaptable to network transmission, it can be easily shared on WeChat, Weibo, short videos, or YouTube [3].

Ideological and political courses [6] are a compulsory course for college students. Due to the needs of teaching innovation, the flipped classroom model has been gradually introduced into the course [7]. Adhering to the concept of autonomous learning in the inverted classroom, the microlecture teaching method has been widely used and promoted in ideological and political courses. The application of

microlecture in ideological and political courses (IaPC) has many advantages [8]. For example, the explanation of a single topic can make it easier for students to understand. The microvideo method is conducive to the dissemination of knowledge itself, and students can also easily obtain it through the Internet. Students can also post their own comments under the video to achieve the purpose of interaction. In addition, college teachers make full use of microlecture to obtain better teaching effects, improve students' enthusiasm and sense of happiness in learning ideological and political theory courses, and thereby improve teaching effects [9].

It is undeniable that microlecture have played a significant role in innovative ideological and political teaching effect. However, the specific factors used by microlecture to influence the effect of IaPC in colleges need to be further explored. For example, Zeng [10] proposed that as a new education model emerging at home and abroad, microlecture needs to introduce ideological and political education in colleges. However, the feasibility and effectiveness of the design of the teaching mode of ideological and political

education in colleges based on microlecture need to be studied in depth. Wu [11] believed that microlecture, as a new teaching method under the background of "Internet plus," provides rich resources for ideological and political education and can expand its education direction. However, the neural network [12–15] information technology [16, 17] represented by the microlecture affects people's thinking mode, value orientation, and development trend in the field of culture and thinking. But how does microlecture influence ideological and political teaching at colleges? This paper is centered on this question.

In view of this, according to the specific characteristics of the microlecture, this article constructs a model of the influencing factors of the teaching effect of IaPC in colleges. Our research data are derived from a survey of 237 students who have taken ideological and political courses, and SmartPLS software is used to verify the research hypothesis. The purpose is to explore the concrete influence of microlecture on the teaching effect of IaPC in colleges. Our study is of great significance to guide university teachers to improve ideological and political teaching and enhance teaching effect. Moreover, we have enriched the research of microlecture in the field of ideological and political courses.

The rest of the paper is arranged as follows: the second part is a literature review; the third part constructs the research model and puts forward research hypotheses; the fourth part introduces methods and provides empirical results; the fifth and final part presents the conclusions.

2. Literature Review

2.1. Features of Microlecture. As a new type of online learning resources, microlecture has been developed rapidly all over the world [18]. With the progress of information and communication technology and the widespread use of mobile smart phones [19], microlecture has also been mobilized from the original web page format.

According to the definition of microlecture [3–5] and practice [9–11], it can be found that microlecture has the characteristics of single content, easy learning, convenient sharing, and real-time interaction. Single content means that in the process of making a microlecture, teachers will generally explain a topic in a microlecture, so that the knowledge of the microlecture is focused [20]. Ease of learning means that students can easily learn and understand the video content due to the simplification of the subject of the microlecture [21]. Generally speaking, the subject content of a single microlecture is relatively small. There are many reasons for sharing convenience. First of all, the content of microlecture is small, and the speed of transmission is fast; secondly, the wide application of mobile smart devices in the crowd provides a huge user base for microlecture [22]. Interaction refers that teachers and students, students and students can comment and interact online on the content of the microlecture through the Internet platform [23].

2.2. Application of Microlecture in Ideological and Political Courses in Colleges. The ideological and political courses are theoretical courses, and traditional teaching methods are often difficult to achieve the expected results [24]. Due to the strong theoretical nature in the IaPC, students will find it difficult to learn [25]. In addition, a strong theory also means that the content is somewhat boring [26]. To solve the above issues, college teachers have tried a lot of means to reform teaching. For example, real stories are introduced into IaPC to increase the learning interest of students [27]. In addition, teachers are no longer limited to traditional offline teaching but began to explore teaching methods that combine IaPC with the Internet [28].

Microlecture meets the needs of college teachers for ideological and political curriculum reform in the mobile Internet era and is widely used in practical teaching [29]. First of all, microlecture can vividly explain ideological and political knowledge through video and audio methods, which solves the problem of boring content to a certain extent [30]. Secondly, microlecture can decompose a certain complex knowledge in a targeted manner to form continuous learning videos, which can reduce the learning difficulty of students [31]. Furthermore, with the increase of microlecture recording courses, a huge database of ideological and political knowledge can be formed, which facilitates students to search for specific knowledge [32]. Finally, microlecture makes up for the shortcomings of low participation of offline course students and insufficient teacher-student interaction [33].

From the above literature analysis, we can see that microlecture has played an important role in the innovation of IaPC in colleges. Scholars (e.g., Wang and Fan [30]; Cui [31]; Ran [33]) extensively discussed the advantages of microlecture in IaPC. However, the above-mentioned research is mainly based on conceptual and case studies and lacks empirical analysis. This paper is aimed at establishing a model of the influencing factors of microlecture on the teaching effect of IaPC in colleges and conducting empirical analysis on the data collected by the questionnaire and then identifying specific influencing factors.

3. Theoretical Framework and Research Hypothesis

3.1. Theoretical Framework. Based on the above analysis of the superiorities of microlecture and the discussion of the application of microlecture in IaPC, this study has determined the four influencing factors of microlecture on the teaching effect of IaPC in colleges, namely, single topic, easy to learn, convenient to share, and real-time interaction. Also, we constructed a model of the influencing factors of microlecture on IaPC in colleges, as shown in Figure 1. The theoretical model will guide the following research hypotheses, questionnaire design, and empirical analysis.

3.2. Research Hypothesis

3.2.1. Single Topic. Traditional IaPC usually adopt offline teaching methods. The time of a single course is relatively long, the knowledge points taught are more, and the topics involved are also diversified [24, 25]. The application of microlecture in IaPC adopts the opposite teaching concept.
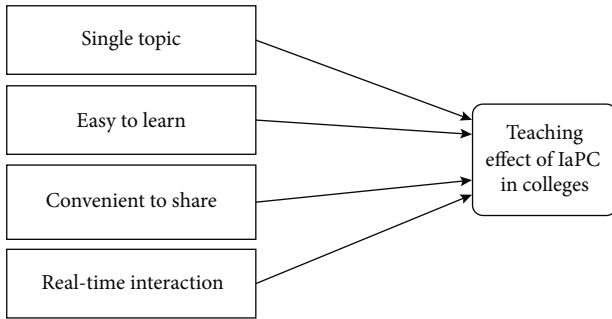
FIGURE 1: Theoretical model.

That is, each microlecture only teaches one topic. And when there is too much content in a certain topic, it tends to decompose the content of a single topic to form a set of topic content that can be continuously learned [4]. Its advantages are as follows: firstly, the subject is clear, which is convenient for students to search and review according to their learning needs. Students' learning provides confidence and convenience [31]. Based on the above discussion, we propose the following research hypotheses:

Ha: the single topic characteristics of microlecture are conducive to improving the teaching effect of IaPC in colleges.

3.2.2. Easy to Learn. IaPC are theoretically strong and involve many contents, and the teachers' teaching styles are boring, etc., which are often the main reasons why students are unwilling or not to actively participate in the ideological and political classroom [25, 26]. However, microlecture provides new ideas for solving the above-mentioned problems. The content decomposition concept of microlecture invisibly reduces the huge course pressure of students [31]. Introducing modern elements such as stories and news into the microlecture, as well as playing the microlecture repeatedly, can help students understand the theory very well [30]. In addition, the teacher's speech tone and speed can also be designed and optimized through computer software [34]. It is worth mentioning that microlecture does not move traditional offline classrooms to online. It can display ideological and political knowledge through animation and other forms, which can enhance learning autonomy and interest in learning [35]. Accordingly, we propose the following hypotheses:

Hb: the easy-to-learn characteristics of microlecture are conducive to enhancing the teaching effect of IaPC in colleges.

3.2.3. Convenient to Share. Traditional offline ideological and political teaching is a "one-off" course, while microlecture is recorded by means of video or audio [5] and can be disseminated on the Internet [3]. Particularly in the hot era of microvideo apps, microvideos of about 2 minutes consume less traffic and spread faster [36]. It is precisely because of the above characteristics that ideological and political knowledge points can also be integrated according to the current news, thus launching a microlecture that keeps pace with the times. The subject of the microlecture is single, and the content is small, and the teacher spends less time and

experience in making a microlecture [4]. After the microlecture is finished, it can be quickly uploaded to the Internet. And students can also search and forward on the Internet. Microlecture uses Internet platforms and mobile communication methods to make ideological and political teaching repeatable [37]. Accordingly, we propose the following research hypotheses:

Hc: the convenient-to-share characteristics of microlecture are conducive to improving the teaching effect of IaPC in colleges.

3.2.4. Real-Time Interaction. Teacher-student interaction is an important part of IaPC. The interactive part of traditional IaPC is in the "45-minute classroom," while the teacher-student interaction of the microlecture is based on the Internet and real-time [33]. After the teacher finishes making the ideological and political microlecture, they can upload it to the microvideo app (e.g., Douyin and Weishi) or share it with the class group. After watching the microlecture, students can like, forward, or comment online [38]. In addition, students can also share microlecture to WeChat Moments, Weibo, and other platforms. In this way, students can not only interact with teachers and classmates on a certain ideological and political knowledge. Because the user groups of different online platforms are different, students can also discuss and interact with groups of different identities (e.g., workers, natural scientists, and politicians) [39]. Obviously, the real-time interactive function of microlecture has expanded the scope of IaPC and increased the interaction between students and teachers, students and students, and even students and social groups. Therefore, we propose the following research hypotheses:

Hd: the real-time interaction characteristics of microlecture are conducive to enhancing the teaching effect of IaPC in colleges.

4. Research Methods and Results

4.1. The Design of Questionnaire. Based on literature analysis, model construction, and research hypotheses, we designed the research questionnaire. The questionnaire contains two parts, one of which is the basic information of the surveyed person (including gender, age, whether the respondent is a college student, whether the respondent has studied IaPC, and whether the respondent has any experience in learning through microlecture), and the other one part is the research variables (including single topic, easy to learn, convenient to share, real-time interaction, and teaching effect of IaPC in colleges). The basic information of the respondents is used as the control variable in this study. The observed variables of each latent variable were quantified using the 5-point Likert scale [40]. According to scholars' opinions and research conclusions, this paper developed the questionnaire scale (see Table 1).

4.2. Data Collection. Our data were collected through questionnaires. The objects of data collection are college students in our work unit, and IaPC are a compulsory course for them. The questionnaire survey started in June 2021 and

TABLE 1: Questionnaire scale.

Latent variables	Observed variables	References
Single topic (ST)	a1: I like the single topic of ideological and political knowledge learning method. a2: the single topic of the microlecture reduced my study pressure. a3: the single topic of the microlecture facilitates me to retrieve related ideological and political knowledge.	Zhao and Yang [4]; Cui [31]; Zhao and Zhan [32]
Easy to learn (EtL)	b1: the learning method of microlecture makes it easier for me to understand ideological and political knowledge. b2: I think the introduce microlecture into ideological and political teaching has made our study more interesting. b3: I think the teacher's lectures in microlecture are more vivid and interesting.	Wang and Fan [30]; Liu [34]; Lai and Pan [35]
Convenient to share (CtS)	c1: in my opinion, the fast-spreading speed of microlecture helps me to get in touch with more ideological and political knowledge. c2: I think it is convenient for me to share microlecture, which is conducive to my timely acquisition of relevant ideological and political knowledge. c3: in my opinion, the sharing of microlecture is convenient, which is conducive to my repeated learning of relevant ideological and political knowledge.	Zhou et al. [36]; Du [37]
Real-time interaction (RTI)	d1: I often make comments on the ideological and political content in the microlecture. d2: in my opinion, commenting on the ideological and political content in microlecture is conducive to the interaction between teachers and students. d3: in my opinion, microlecture provides a very good online platform for the interaction of ideological and political teaching.	Duan [38]; Lu [39]
Teaching effect of IaPC in colleges (TE)	h1: I think teachers can make full use of microlecture to improve the teaching effect. h2: I was more active in the microlecture. h3: I hope teachers can often teach IaPC in the way of microlecture.	Wen and Zhang [8]; Min [9]

TABLE 2: Descriptive statistical results of questionnaire survey.

Basic information	Items	Rate	Basic information	Items	Rate
Gender	Male	56%	College students	Yes	94%
	Female	44%		No	6%
Age	18-20	13%	Whether have studied the course of ideological and politics	Yes	100%
	21-23	58%		No	0%
	23-25	25%	Whether have the experience of learning through microlecture	Yes	95%
	>25	4%		No	5%

ended in July 2021. The questionnaire was distributed online. All respondents participated anonymously and were told at the beginning of the questionnaire that the questionnaire data were only used for scientific research. A total of 253 questionnaires were collected in this survey, among which 237 were valid, with an effective rate of 93.7%. The descriptive statistical results of this survey are shown in Table 2.

4.3. Data Analysis

4.3.1. Reliability and Validity Test. In this paper, SmartPLS software was used to verify the reliability and validity. The results in Table 3 show that Cronbach's Alpha (CA), Combined Reliability (CR), and Average Variance Extracted

TABLE 3: Results of reliability and validity tests.

Construct	CA	CR	AVE
ST	0.808	0.876	0.729
EtL	0.754	0.813	0.675
CtS	0.703	0.718	0.642
RTI	0.843	0.867	0.727
TE	0.735	0.768	0.695

(AVE) all reach corresponding thresholds [41], where the minimum value of CA is 0.703, the minimum value of CR is 0.718, and the minimum value of AVE is 0.642. The results in Figure 2 show that the external load values of each
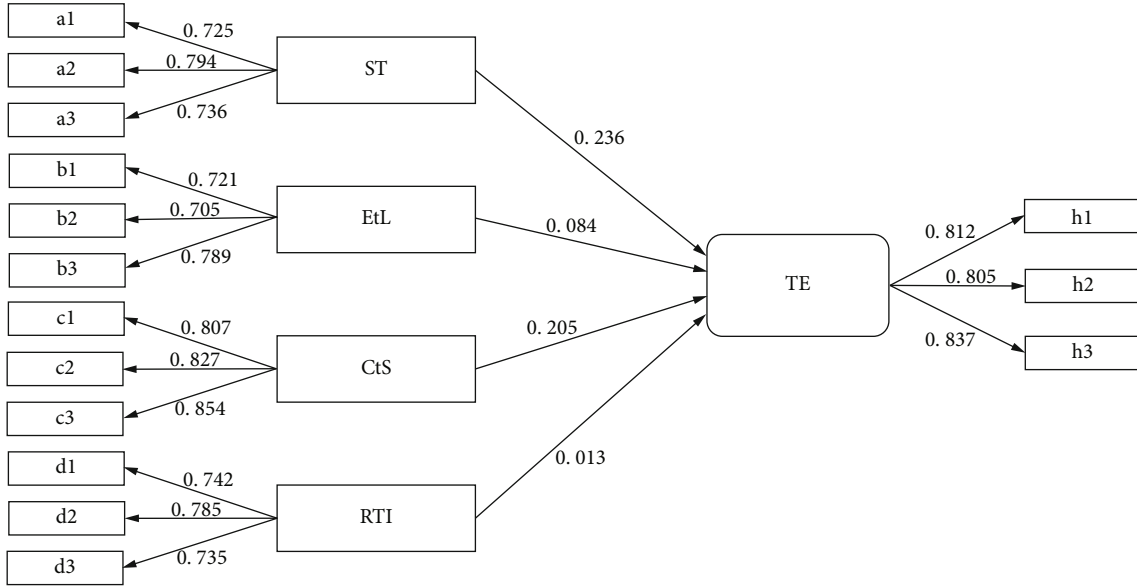
FIGURE 2: Results of the model.

TABLE 4: Average Variance Extracted (AVE) square root and factor correlation coefficient.

	H	Ha	Hb	Hc	Hd
TE	0.857				
ST	0.525	0.819			
EtL	0.407	0.627	0.762		
CtS	0.579	0.516	0.593	0.731	
RTI	0.431	0.348	0.375	0.426	0.658

Note: diagonal elements are the square root of Average Variance Extracted (AVE).

TABLE 5: Results of hypothesis testing.

Hypothesis	Path	Path coefficient	t value	P value	Hypothesis supported?
Ha	ST → TE	0.236	3.215	0.014	Y
Hb	EtL → TE	0.084	1.983	0.048	Y
Hc	CtS → TE	0.205	5.906	0.001	Y
Hd	RTI → TE	0.013	0.636	0.713	N

observed variable are all greater than 0.7, and the minimum value is 0.705. This indicates that the model we constructed has high reliability and validity [41]. The results in Table 4 show that the square root of AVE is greater than the correlation coefficients between it and other latent variables, which indicates that there is no multicollinearity between the latent variables in our study [42]. The built model has an R^2 value of 0.47, indicating that it has excellent explanatory power. In addition, the model's fitting degree has reached the required level.

4.3.2. Hypothesis Testing. We performed bootstrapping operation in SmartPLS software to verify the research hypothesis. The results showed (see Table 5) that Ha, Hb, and Hc have

passed the test ($P \leq 0.05$) [42], while Hd did not pass the test ($P > 0.5$) [42]. The results show that in microlecture teaching, single topic, easy to learn, and sharing convenience are the main factors to enhance the teaching effect of IaPC in universities, while real-time interaction had no significant effect. Therefore, we find that factors such as single topic (Ha), easy to learn (Hb), and sharing convenience (Hc) support the conclusions and opinions of previous scholars. However, our research shows that real-time interaction (Hd) is contrary to the views of Duan [38] and Lu [39].

5. Conclusions

The offline teaching mode of IaPC is difficult to stimulate students' enthusiasm for learning because of its over content and strong theory. The emergence of microlecture offers a novel way to figure out the above problems. Microlecture has the characteristics of single topic, easy to learn, convenient sharing, and real-time interaction. Whether these characteristics are conducive to enhancing the effect of ideological and political teaching in colleges is the central point of this paper. Therefore, the focus of this study is on identifying factors that influence the teaching effect of microlecture in college ideology and politics courses. In particular, we developed a microlecture influence factor model for ideological and political education in colleges. We confirm the four features of microlecture by a questionnaire survey and empirical research. The results show that in microlecture teaching, single topic, easy to learn, and sharing convenience are the main factors to enhance the teaching effect of IaPC in colleges, while real-time interaction had no significant effect.

Our research has contributed to the literature on microlecture in ideological and political teaching by identifying the possible factors influencing ideological and political teaching in colleges, as well as confirming that microlecture can help improve the teaching effect of ideological and political in colleges. Based on the research results, we propose the following

recommendations: (1) in ideological and political teaching, recorded microlecture should concentrate on a single topic as far as possible, and the time of microlecture should be controlled to be shorter; (2) since students believe that microlecture makes their study easier and share convenience, universities should consider promoting this mode in IaPC.

However, there are some limitations in this study. First, from the characteristics of microlecture, we have discussed their influence on the teaching effect of IaPC in colleges. But factors such as the level of use of smart mobile devices and the prevalence of the Internet could also influence the results. Therefore, future study can be conducted based on more diverse perspectives and consider more factors. Second, we have explored the influencing factors of microlecture in the teaching of IaPC, but the influence of different courses needs to be further explored. Third, the samples in this study are mainly from our work units, and it remains to be further proved whether the research results are different among other universities. Fourth, because our data is collected online, it is difficult to trace the accuracy of the information provided by respondents. Hence, in the future, we may be able to gather data offline or include a test to verify the accuracy of the information in the questionnaire. Finally, the sample size of effective questionnaires collected in this paper is limited, so the sample size can be appropriately increased in the future, so as to obtain more general results.

Data Availability

The data used to support the findings of this study are included within the article.

Conflicts of Interest

The author does not have any possible conflicts of interest.

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