Cultivation of College Teachers' Micro-course Design, Shooting and Editing Skills

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Abstract: *The theme of this paper is that for college teachers, micro classes will reform the traditional teaching methods, break through the traditional teaching and research models, and make teachers' lesson preparation, teaching and reflection more targeted and effective. The specific objectives of the research are the current situation of college teachers' use and cognition of micro lessons, the skills of college teachers' micro lesson design, shooting and editing, and the learning and training of college teachers' micro lesson skills. This study uses a quantitative research method, and the respondents need to answer 23 questions in the "online questionnaire". All the interviewees in this questionnaire are asked the same questions, and the interviewees are compared and analyzed under the same situation, which can investigate the different consciousness and state of micro lesson production with college teachers. Its research significance lies in rapidly enhancing teachers' classroom teaching level and promoting the growth of teachers' teaching ability. Based on the results of the questionnaire survey on college teachers' cognition of micro lesson making and their skills, it is expounded that as a new teaching form and method, the mastery of micro lesson design, shooting and editing skills should become the primary issue to be considered.*

Keywords: *micro-class, design, shooting, editing and cultivation*

1. Introduction

The total capacity of micro lessons is generally about 10 megabytes, and the video format must be a streaming media format that supports the online playing of the network. Teachers and students in colleges and universities can watch online, view lesson plans, courseware, exercises and other auxiliary resources; they can also download and save them to the terminal equipment for mobile and free learning, which is very suitable for teachers to observe, comment on lessons, reflect on and teach and research[6].

Micro course design, shooting and editing skills is a way to improve the teaching ability of college teachers, is also a new mode of student learning, provides a new ideas for college education; therefore, the cultivation of college teachers micro course production skills is very important..

1.1 Literature Review

In "Micro-course Production and Innovation Education" (2020), Huang Qiang put forward that micro-course jointly creates a semi-structured and prominent theme resource unit application ecological environment with certain structural relations and presentation methods. It is a new type of teaching resource, and teaching videos are mainly based on lesson examples. Wu Yanliang, Zhang Chaohong and Jia Shujun pointed out in the article "Problems and Improvement Suggestions" that there are seven outstanding problems in the production of micro lessons, and put forward a total of six suggestions for improvement. The Revitalization Plan for Teacher Education (2018-2020) puts forward the innovative education action of "Internet + teacher education", and proposes that "the construction and application of information teaching service platform for teacher education should be promoted, and the reform of teaching methods with autonomy, cooperation and inquiry as the main characteristics". In The Problems and Coping Strategies in the Design and Production of Micro-Courses in Colleges and Universities, Feng Rui proposed that the flipped classroom teaching mode or mixed classroom teaching mode guided by students' independent learning has gradually been widely used in classroom teaching in colleges and universities. As an essential teaching resource in the teaching mode of flipped classroom, micro-course has gradually attracted the attention of researchers and achieved a series of research results. Yu Hongliang (2019) put forward in the Introduction to Micro Curriculum that many issues such as the historical background, theoretical basis, conceptual basis, existence basis, value demand, media technology,

curriculum design, teaching mode and evaluation standard are still under discussion. In the "Development and Application of Key Technologies of Micro-course Production in Various disciplines", Chen Ping (2021) pointed out that the micro-course production technology can not only improve the information skills of normal university students, but also improve the comprehensive professional quality of teachers. In "Research on the Application of Micro courses in College Curriculum Teaching Design", Jia Yaotian (2020) pointed out that in the context of information technology, all kinds of online teaching appear accordingly, and micro courses, as an organic connection between information technology and college teaching, are favored by the majority of teachers and students in colleges and universities. In "Research on Mobile Phone Shooting Mode in the" Micro Era ", Xu Longji (2016) believes that mobile phone shooting video has the following four characteristics: convenience, liberalization, diversification and universality. Yang Ming Lecturers Group (2017) combined the equipment of technology and the production platform, and made a brief introduction to various shooting methods and production platforms, and led readers to master the shooting methods of quality micro-class, excellent class and MOOC teaching videos. In the Research on the Lens Structure of Micro-class Video, Liu Tao (2020) proposed that micro-class video is the most important part of micro-class. Lu Baolang and Wang Yi (2020) provide the methods of designing and producing several common types of micro lessons in "Preliminary Exploration of Making Micro lessons Using Mobile Phone Cutting APP". In The Cut Tutorial, Long Fei (2021) helps readers make ideal video effects faster and better, from color mixing, special effects to effect production. In "Micro Class Video Production and Flipped Classroom Teaching", Ma Jiuke (2016) provided a case of flipped classroom teaching, and introduced the design ideas, production and student feedback of micro class video in detail. In the "Micro Course Design and Production Professional Course", Zhang Xiaojing (2017) systematically introduced the basic concepts of micro course design, the basic operations of Camtasia Studio and Snagit, and explained a lot of methods, principles and experiences.In the Analysis of the Misunderstandings and Development Concept of College Micro-courses in the Era of Big Data, Lei Liting and Li Xiujing (2020) proposed to analyze the misunderstandings in the development of micro-courses in the era of big data, and further discuss the development concept of micro-courses. Zhang Hai and Fan Guoyu (2017), based on the experience of more than 500 micro-class production, gave a representative brand, and analyzed the advantages and disadvantages and how to use it. Suna (2020) pointed out in her Brief Analysis of the Design and Production Skills of Demonstration Micro-course that how to make the micro-course well and apply it to education and teaching is of great significance for improving the teaching quality. Fang Qigui (2019) introduced the knowledge of the design, shooting, production and use of micro-lessons in detail in the course, so that readers can easily make micro-lessons that can be applied to practical teaching. Chen Jie (2020) discussed the video Design and Practice of College Micro-courses in the era of fragmentation, which accelerated the attention and application of micro-courses in colleges and universities. Jin Jie (2018), in the design of the basic knowledge of micro-course and the main functions of tool software. Through demonstration cases, it enables learners to master and effectively start the micro-class production of micro-course in a short time.Luo Xiao and Fan Xinrong (2020) comprehensively explained the design and production of audio, video, live broadcasting, recording and animation, as well as whole teaching management, case introduction, tool practice, and output. Hu Xiaoyong (2017) clearly pointed out in "Design Good Micro Class" that in addition to the necessary technical means, good micro course must adhere to the implementation of content as king, gather key points, control the duration, design guidance, highlight the key points, moderately blank space, finish the beginning and end, and take into account the diversified forms, from the innovative perspective of teaching rules. Zhu Ding(2020) in the micro class, MOOC and flip classroom video production, educators constantly thinking, positive improvement, elaborate design course content, to maximize classroom time use, it takes the student as the center, students active learning teaching strategy, and each student separate communication and teaching, the classroom to learning and disabuse, truly according to their aptitude.[1].

1.2 Theoretical/conceptual Framework

China's Ministry of Education (MOE) outlined in its 13th Five-year Plan for Education Informatization in 2016 that by 2020, China will basically establish an education informatization system in line with the national education modernization development goals. It is necessary to construct and perfect the standards of teachers' IT application ability, and bring the IT teaching ability into the curriculum system of normal school students training.The teachers' ability to apply information technology shall be included in the compulsory hours (credits) of teacher training, and the improvement of such ability shall be closely related to the training of subject teaching, and the training of lesson examples and teaching methods featuring information technology shall be carried out in a targeted manner, so as to improve the teachers' ability to apply information technology to conduct learning

situation analysis and individualized teaching, improve the teachers' creativity in education and teaching under the information environment, and make the information technology teaching become a normal situation for teachers in teaching activities.[5].

1.3 Significance of the Study

For college teachers, micro-course will reform the traditional teaching and teaching research methods, break through the original teaching mode, and make teachers' resources for lesson preparation, teaching and reflection more targeted and effective. The advantages of micro-lessons are obvious, that is, simple knowledge points, single learning content and goal, and short learning time. Teachers can be inspired by the micro-lessons, and some can even be copied into their own teaching. In this real, specific and case-based teaching situation, the majority of teachers can easily realize the learning of tacit knowledge and other advanced thinking ability, and realize the imitation and improvement of teaching concepts, skills and styles, so as to quickly enhance the classroom teaching level of teachers and promote the growth of teachers' teaching ability[3] .

1.4 Objectives of the study

This study mainly has the following research purposes:

(1) The first research purpose is the current situation of university teachers' use and cognition of micro-courses. It mainly studies the basic information of university teachers involved in the research, the use information of micro course production, the effect information and the production status of micro course in universities;

(2) The second research purpose is the micro-course design, shooting and editing skills of university teachers. The main purpose is to study and understand the mastery of micro-course design, shooting and editing skills;

(3) The third research purpose is to study and cultivate the university teachers' micro-course skills. The main purpose is to study what external factors and internal factors there are, which can affect the cultivation of university teachers' micro-course production skills, and evaluate from what aspects that college teachers can improve their micro-course production skills.

2. Methodology

2.1 Study design

This study uses a quantitative research method, based on the ratio analysis method and extended by the structural analysis method and comparative analysis method, and the respondents need to answer 23 questions in the "online questionnaire".

This questionnaire does not need to be signed. The interviewees can freely express their real thoughts and conditions. If there are privacy issues involved in the questionnaire, the interviewees in the non-anonymous state can have no scruples.

In this questionnaire, all the interviewees are asked the same questions. Through comparative analysis of the interviewees under the same situation, we can find out the different consciousness and state of the university teachers and the university teachers towards the micro class production.

2.2 Study samples

The inclusion criteria of the research participants were teachers with formal teaching qualifications and a complete teaching process, and informal teachers, trainee teachers and administrative teachers were excluded from the survey participants.

This study mainly adopts the form of questionnaire, and the effective questionnaire is 100%, a total of 160.

Among the 160 effective subjects, 158 teachers have participated in micro class production, and 2 teachers have no experience in micro class production.

Among the 158 teachers participating in the micro class production, 46 teachers have won awards in

the school level micro class competition, 12 teachers have won awards in the provincial micro class competition, and no teachers have won awards in the national micro class competition.

The survey results show that the main problems encountered by university teachers in the production of micro courses are that they do not know how to determine the topic of micro courses, do not know how to design micro courses, are not familiar with the shooting of micro courses, do not handle the recorded videos well, and encounter technical problems when integrating materials.

2.3 Research data collection tools

This paper adopts the form of questionnaire. The whole questionnaire includes 23 required questions, which comprehensively covers the problems that often exist in the process of micro class design, shooting and editing. Including the most expected support and help for college teachers in the design and production of micro courses, the factors that affect the improvement of teachers' micro course design and production ability, and the skills that need to be improved in the process of designing, shooting and editing micro courses and micro courses.

2.4 Research data collection steps

(1) Exchange information. The exchange of information is divided into three modules, which are the cognitive status, operational skills and learning training of University Teachers' micro class production.(see Table 2)

(2) Whether the authority approves. This research has been approved by the departments and teaching and research departments of teachers in various universities.

(3) Distribute and collect questionnaires. The questionnaire was handed out to the teachers by the author, and the subjects completed it voluntarily. The purpose of this questionnaire is to understand the problems that teachers often encounter in the process of making micro classes and help teachers improve teaching efficiency.

(4) Data collection time. Two weeks (14 days) from March 8, 2022 to March 22, 2022.

2.5 Processing research data

(1) **Summarize and analyze data.** The results of the quantitative survey of this questionnaire depend on statistics. It is hoped that the overall situation composed of a large number of individuals will focus more on the choice of questions rather than the distribution of variables through relatively more individual answers.

(2) **Ethical Consideration.** This survey is anonymous. The teachers participating in the survey will get a copy of the micro class production guide prepared by the author. The author kept all the information filled in by the interviewed teachers confidential, locked the scope of R & D personnel, concealed their real names, and then entered the research results[2].

3. Results and discussion

In the process of making micro courses, it also includes software recording screen, PPT recording screen and animation production, which will not be discussed in this paper. Next, this paper will discuss the results of the training of micro class design, shooting and editing skills from the perspective of cameras, mobile phones and other practical shooting tools[8].

3.1 Cognitive status of the use of micro courses in Colleges and Universities

3.1.1 Basic information

Among the respondents who volunteered for the survey,

In terms of age, teachers aged 31-40 are the most, accounting for 53.3%, and only 11.2% of teachers over 50 are willing to accept the survey;

In terms of teaching age, there are more teachers with 5-10 years of teaching age, reaching 44.4%, and the proportion of teachers with more than 20 years of teaching age is 15.6%;

In terms of teachers' professional titles, the proportion of lecturers is the highest, reaching 51.9.4%, followed by teaching assistants reaching 35%, and less are associate professors (10.6%) and professors (2.5%).

From the distribution of courses taught by teachers, the proportion of teachers in professional compulsory courses is the highest (31%), followed by public basic courses (26.2%).

It can be seen that young and middle-aged teachers who have been teaching for more than 5 years are most concerned about the production of micro courses. Teachers with intermediate professional titles like to learn the production skills of micro courses, while older teachers who have obtained senior professional titles are slightly indifferent to the acceptance of new skills of learning micro courses. (see Table 1)

Table 1: Basic information of Teachers

Age	Number of people	Proportion	Teaching age	Number of people	Proportion
Under 30	32	20%	Less than 5 years	27	16.9%
31-40 years old	64	53.3%	5-10 years	71	44.4%
41-50 years old	46	28.8 %	10-20 years	37	23.1%
Over 50	18	11.2 %	More than 20 years	25	15.6%
Title	Number of people	Proportion	Teaching courses	Number of people	Proportion
Assistant	56	35%	Public basic course	42	26.2%
Lecturer	83	51.9%	Professional basic courses	40	25%
Associate professor	17	10.6%	Professional compulsory courses	50	31.2%
Professor	4	2.5%	Professional elective courses	28	17.5%

3.1.2 Usage information

In the frequency of using information-based equipment or settings in classroom teaching (such as multimedia, electronic whiteboard, rain classroom, flipping campus, etc.), the proportion of "often" using information-based equipment for teaching reaches 86.2%, and the number of "almost none" and "occasionally" is 0;

51.9% of the teachers "often" watch micro classes made by other teachers, and the number of "almost none" is also 0;

The main way for 52.5% of teachers to obtain micro courses is online download, followed by colleague recommendation (21.9%) and market purchase (10.6%), and the proportion of self-development is the lowest, only 1.5%.

Table 2: Use information of micro class

Information equipment	Number of people	Proportion
Hardly any	0	0
Occasionally	0	0
Sometimes	22	13.8%
Often	138	86.2%
Watch micro classes made by other teachers	Number of people	Proportion
Hardly any	0	0
Occasionally	24	1.5%
Sometimes	53	33.1%
Often	83	51.9%
Main ways to obtain micro courses	Number of people	Proportion
Network download	84	52.5%
Colleague recommendation	35	21.9%
Market purchase	17	10.6%
Self-development	24	1.5%

It can be seen that the reason why teachers are very willing to use micro classes for teaching is that the teaching time of micro classes is short, students can learn repeatedly after class, its video form is convenient to watch, and the scene is real, which is conducive to students' autonomous learning. Micro class is interactive and easy to use. It can focus on solving one knowledge point and make up for the

problem of low classroom efficiency. Most teachers believe that micro classes are very popular, and they also hope to keep up with the times. (see Table 2)

3.1.3 Effect information

In the research on the effect of micro class teaching, 37.5% of teachers believe that micro class is an effective supplement to classroom teaching, 34.3% of teachers believe that micro class is the material of students' autonomous learning, 26.2% of teachers believe that students' interest in learning has become stronger through micro class teaching, only 1.9% of teachers believe that students' interest in learning has not changed much, and the proportion of teachers who think students do not like to use micro class is 0;

Among the types of micro classes required by the surveyed teachers, 55.6% of the teachers need to operate demonstration micro classes, 21.9% of the teachers need self-learning micro classes, followed by initiation micro classes (11.2%), teaching micro classes (7.5%), and question answering micro classes account for the lowest proportion, only 3.8%.

It can be seen that micro courses are very popular in Demonstration Courses of practical operation. For example, science and engineering majors with laborious and cumbersome operation are often used by teachers as an effective supplement to classroom teaching and become materials for students' autonomous learning. Some interesting micro classes do enhance students' interest in learning, but micro classes can not replace teachers to answer all kinds of questions for students in real situations. (see Table 3)

Table 3: Effect information of micro class

Teaching effect of micro course	Number of people	Proportion
Students' interest in learning has become stronger	42	26.2%
Students' interest in learning has not changed much	3	1.9%
Students don't like using micro classes	0	0
Micro class is an effective supplement to classroom teaching	60	37.5%
Micro class is the material for students' autonomous learning	55	34.3%
Required micro class type	Number of people	Proportion
Lecturing type	12	7.5%
Question answering type	6	3.8%
Hair initiation	18	11.2%
Operation demonstration type	89	55.6%
Autonomous Learning	35	21.9%

3.1.4 Production status

Among the teachers interviewed, 83.8% were not familiar with the production process of micro class, and only 1.3% were very familiar with the production process of micro class. They were all professional teachers teaching video production;

98.6% of teachers encountered the problem that they did not know how to determine the topic and reflect creativity, could not find suitable materials, and did not know how to deal with the existing materials;

79.4% of teachers would seek help from others every time when making micro class, and the proportion of teachers who would never seek help was 0;

100% of teachers will seek the help of micro class teaching design, followed by micro class topic selection (98.1%), editing (97.5%) and shooting (96.9%). In these aspects, more than 96% of teachers need help.

It can be seen that the micro class has indeed been greatly welcomed by teachers in the teaching of colleges and universities, but most teachers are quite lack of skills in the design, shooting and editing of micro class. (see Table 4)

Table 4: Current situation of micro course production

Production process of micro course	Number of people	Proportion
Very familiar	2	1.3%
Basic familiarity	5	3.1%
Be unfamiliar with	134	83.8%
Very unfamiliar	19	11.9%
Problems encountered in making micro class (multiple choices)	Number of people	Proportion
I don't know how to determine the topic and reflect creativity.	157	98.1%
The picture taken is not good-looking. There are problems in picture, color and sound acquisition.	136	85%
I can't find the right material. I don't know how to deal with the existing material.	158	98.6%
I am not familiar with the software of micro class editing, and I encounter technical problems in material integration.	158	98.6%
Making micro classes will ask for help	Number of people	Proportion
Never	0	0
Occasionally	2	1.3%
Often	16	10%
Every time	127	79.4%
What help will you seek (multiple choice)	Number of people	Proportion
Selected topic	157	98.1%
Instructional design	160	100%
Shot	155	96.9%
Clip	156	97.5%

3.2 Micro course design, shooting and editing skills of College Teachers

3.2.1 Design skills of micro courses

66.9% of the teachers surveyed thought that their teaching design "did not meet" the requirements of micro course production, and only 7.5% thought that "basically met" the requirements of micro course teaching design, and the number of very qualified teachers was 0;

40% of the surveyed teachers believed that the sentence of micro class design was a teaching link, activity or process, followed by the key points, difficulties or test points in teaching (35%), followed by the syllabus or curriculum standards (14.4%), and 10.6% of the surveyed teachers would compile and design micro classes according to the content of teaching materials.

It can be seen that in the first link of micro class production, most teachers are not familiar with the difference between micro class teaching design and ordinary teaching design, and do not know what aspects of micro class teaching design should be prepared from. (see Table 5)

Table 5: Design skills of micro course production

Teaching design of writing micro course	Number of people	Proportion
Very consistent	0	0
Basically consistent	12	7.5%
Accord with	41	25.6%
Non conformity	107	66.9%
Basis for micro course design	Number of people	Proportion
Syllabus or curriculum standards	23	14.4%
A teaching link, activity or process	64	40%
Key points, difficulties or test points in Teaching	56	35%
Design according to the content of teaching materials	17	10.6%

3.2.2 Shooting skills of micro class

Among the teachers interviewed, 23.8% were proficient in using mobile phones for micro class shooting, followed by proficient in using SLR cameras (9.4%), DV cameras (3.75%) and professional cameras (1.25%). 76.2% of the respondents were proficient in using all shooting equipment.

This is because in the shooting process, in addition to skillfully using shooting equipment, there are a series of other problems that affect teachers' micro class shooting. According to the answers to the interviewed teachers, we sorted these questions as follows:

77.5% of the teachers surveyed thought that the micro class picture they shot was not beautiful, 65% of the teachers surveyed thought that their image in the micro class lens was poor, 55% of the respondents thought that the micro class picture they shot was too bright or dark, 47.5% of the respondents thought that their lecture recording was unclear in the micro class shooting, and 38.1% of the respondents thought that the picture they shot was unstable.

It can be seen that although the ownership rate of smart phones by college professors has reached 100%, and they all have the function of high-definition camera. However, there is still a great lack of shooting skills in micro classes. (see table 6)

Table 6: Shooting skills of micro course production

Shooting equipment that can be used skillfully during micro class recording (multiple choices are allowed)	Number of people	Proportion
Mobile phone	38	23.8%
SLR camera	15	9.4%
DV camera	6	3.75%
Professional camera	2	1.25%
None of the above is skilled	122	76.2%
Problems in micro class shooting (multiple choices)	Number of people	Proportion
The picture is shaky	61	38.1%
The picture is not beautiful	124	77.5%
The picture is too bright or too dark	88	55%
The recording of the lecture was not clear	76	47.5%
Poor image in micro class lens	104	65%

3.2.3 Editing skills of micro course

For micro class editing, only 5% of respondents can use professional editing software premiere, and only 42.5% (cutting), 20% (second cutting) and 16.9% (love editing) can skillfully operate non-professional editing software. The proportion of teachers who are not familiar with any editing software is 57.5%.

Table 7: Editing skills of micro class production

Editing software that can be used skillfully in editing micro classes (multiple choices are allowed)	Number of people	Proportion
Shear reflection	68	42.5%
Second shear	32	20%
Love editing	27	16.9%
Premiere	8	5%
Other editing software	9	5.6%
None of the above is familiar	92	57.5%
Problems in micro class editing (multiple choices)	Number of people	Proportion
Unsightly picture layout	88	55%
Unsightly subtitles and typos	94	58.8%
Picture color matching problem	72	45%
Uncomfortable music and sound effects	99	61.9%
How to choose the material	135	84.3%
Editing takes a lot of time	158	98.75%

Even if they can skillfully use editing software, teachers will still encounter problems that they do not know how to choose or reject materials (84.3%), and music and sound effects are uncomfortable

(61.9%). Unsightly subtitles and typos (58.8%), unsightly picture layout (55%), picture color matching (45%) and other aesthetic art problems, and up to 98.75% of the surveyed teachers thought that editing took a lot of time.

This is because the cultivation of editing skills is not only the skilled application of editing software, but also the artistic skills of picture and sound editing. First, edit the whole micro class accurately and vividly, but achieve rigorous structure, distinct rhythm and audio-visual comfort. (see Table 7)

3.3 Learning and training of micro course skills

Table 8: Influence of internal and external factors on micro course skill training

Frequency of micro course skill training	Number of people	Proportion
Three times a year	0	0
Twice a year	20	12.5%
Once a year	60	37.5%
Once every two years	80	50%
Never	0	0
Reasons affecting the promotion of micro course skill training in Colleges and universities (multiple choices)	**Number of people**	**Proportion**
The incentive policy and management system of colleges and universities are not in place	154	96.3%
The information environment of colleges and universities is relatively poor	97	60.6%
Colleges and universities lack the atmosphere of applied micro courses	82	51.3%
Teachers lack the necessary training	143	89.4%
Teachers don't know how to apply micro class to classroom teaching	112	70%
Micro class activities that can be participated in (multiple choices)	**Number of people**	**Proportion**
Actively participate in micro class competition	58	36.3%
Participate in free micro class skill training	142	88.8%
Participate in micro class skill training at their own expense	21	13.1%
Discuss and learn micro class making with colleagues	89	55.6%
Factors affecting the cultivation and improvement of teachers' micro class skills (multiple choices)	**Number of people**	**Proportion**
Lack of corresponding policy and institutional support	153	95.6%
The support of software and hardware facilities in Colleges and universities is weak	128	80%
The attention of university leaders needs to be improved	145	90.6%
Their attention is not high	136	85%

Among the colleges and universities where the teachers were interviewed, 50.6% had carried out micro class skill training within two years, 41.3% had carried out micro class skill training once a year, 8.75% could carry out micro class skill training twice a year, 0% could carry out micro class skill training three times a year, and 0% had never carried out micro class skill training[7].

96.3% of the teachers surveyed believed that the incentive policies and management system for micro courses in their colleges and universities were not in place, 89.4% of the teachers surveyed thought that teachers lacked the necessary skills training for micro courses, 70% of the teachers surveyed thought they did not know how to apply micro courses to classroom teaching, and the proportion of others thought that the information environment of colleges and universities was relatively poor and colleges and universities lacked the atmosphere of applying micro courses was 60.6% and 51.3% respectively.

In terms of personal internal factors, 88.8% of the surveyed teachers will participate in free micro class skill training, 55.6% of the surveyed teachers will discuss and learn the production of micro class with their colleagues, only 36.3% of the respondents will actively participate in micro class competition, and only 13.1% can participate in micro class skill training at their own expense[6].

Another survey data well explains why college teachers are unwilling to actively and actively participate in micro class competition and participate in micro class skill training at their own expense.

The main reasons are: first, the lack of corresponding policy and institutional support (95.6%), and second, the attention of college leaders needs to be improved (90.6%), which leads to the low attention of teachers themselves (85%), In addition, the software and hardware facilities supporting the production of micro courses in some colleges and universities are weak (80%).

It can be seen that the colleges and universities where most of the interviewed teachers are located can carry out the training of teachers' micro class skills, but the problem is that the training frequency is very low, resulting in the low micro class production skills of teachers. Moreover, due to the factors of policy and management, the training and promotion of micro course skills in Colleges and universities are generally not paid much attention.

The interviewed teachers said that as long as there is free micro class skill training, they will actively participate in most of the time. However, due to the small number and large number of free training, the effect of training and practice is not very good, which also leads to many teachers will not actively participate in the micro class competition, and many teachers who have participated in the competition are passively involved. They hope to get the support of corresponding policies, systems, software and hardware in the future, so as to improve their enthusiasm to participate in the design and production of micro courses. (see table 8)

4. Conclusions and recommendations

4.1 Existing problems

4.1.1 Question 1: the current situation of the use and cognition of micro classes

Most teachers like to learn the production skills of micro classes, and are very willing to use micro classes for teaching. Micro classes are very popular in practical demonstration courses. They are often used by teachers as an effective supplement to classroom teaching and become materials for students' autonomous learning. However, most teachers are quite lacking in the skills of micro class design, shooting, editing and production[4].

4.1.2 Question 2: for micro class design, shooting and editing skills

Many teachers do not know how to determine the topic, nor do they know how to reflect creativity. The topics of their micro courses are too large to focus on the teaching priorities and difficulties. It is difficult for them to grasp the teaching design of micro class, and they will not write the design script of micro class video.

During the shooting process, many teachers don't know how to avoid the picture from shaking, how to make their eyes look straight at the lens, how to shoot beautiful, beautiful and soft pictures, and how to present their own image and their own micro class content on the picture perfectly.

Most of the teachers have a poor grasp of editing technology and art. Editing technology is mainly the skilled use of editing software, followed by the pale sense of editing art.

4.1.3 Question 3: learning and training for mastering micro class skills

Most teachers have a positive attitude towards the training of micro courses, but many colleges and universities have a low frequency of training for micro courses, resulting in a long interval between each study, and many knowledge points of the last time have been forgotten. From a personal point of view, college teachers are usually busy with their work, teaching, scientific research, practice, and do not have so much time to practice various skills of micro course production, Occasionally, when passively participating in the micro class competition, you can only turn to others, which consumes a lot of time and energy.

4.2 Suggestions for improvement

1) College teachers should keep pace with the times, actively learn various micro class skills, and actively exchange experience in micro class design, production and teaching with colleagues and students.

2) The knowledge points of micro class design should choose the key and difficult points of teaching, the shooting lens should be stable, the light should be soft, the composition should be beautiful, and the recording should be clear. Teachers can practice editing software more after class, because practice makes perfect.

3) Colleges and universities should give more policy support, competition rewards and leadership affirmation to micro courses. At the same time, they should increase the frequency of micro course skill training, better apply micro courses to classroom teaching, and can also purchase relevant resource libraries to facilitate teachers' learning and integration of resources.

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