

Diversified Innovation and Research of Music Teaching in the New Media Age

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Abstract: *In order to further integrate resources, promote the diversified development of music education and teaching, and help students better carry out music learning, this study, by analyzing the connotation of the development of new media at this stage and the necessity of the application of new media in education and teaching, diversified music teaching methods such as "micro lesson" and "flip class" based on new media technology have been introduced and whether the new media technology is used in piano music teaching in three universities has been investigated. It is concluded that in the development of music teaching in colleges and universities in China, the use of new media remains superficial. Influenced by the traditional way of teaching thinking, the flexibility of teachers' teaching methods needs to be improved. However, teachers and students are full of expectations for the development prospects of piano music education under the new media. In view of the problems existing in the application of new media in music teaching in colleges and universities in China at present, four corresponding suggestions have been put forward to help music teaching in colleges and universities develop and innovate towards a diversified line of defense, and to better promote the development and implementation of music education and teaching.*

Keywords: *New Media Age, Music Education, Diversification, Piano Playing, Micro-Class*

1. Introduction

With the development of science and technology, as an effective media tool, new media technology has been infiltrating into people's learning and life. In the course of the increasingly developing teaching reform, new media technology plays an active role in the optimization of curriculum and the integration of resources. It changes the traditional teaching methods and makes art education, especially music education, more diversified [1, 2]. In the traditional music teaching mode in the past, most of the classroom forms are single, and reflect a lot of repetitive characteristics, which is easy for students to feel bored. However, music teaching based on the new media curriculum can use unusually rich ways of expression, change the traditional teaching of "inculcation" education and teaching form, change the dominant position of teachers in curriculum teaching, make students change from passive learning to interactive learning, and enhance students' interest in learning [3].

Nowadays, under the background of the continuous development and renewal of the new media, the interaction in the course of teaching has been continuously strengthened, and the channels of interaction have become more and more diversified. That's why it's very popular among young students [4]. These different characteristics of the previous teaching make the new media occupy an important position in modern education and teaching. In addition, according to the requirements of all-round development of morality, intelligence, physical fitness and beauty in modern quality education, music teaching plays an irreplaceable role in cultivating students' sentiment, expanding students' thinking and cultivating students' creativity. Therefore, it is an inevitable trend to speed up the reform of music teaching methods and conform to the trend of new media development. It is necessary to use new media technology in teaching so as to realize the interaction between teaching subjects and students, so as to increase the interesting of teaching, enrich the teaching content, and realize the expansion and extension of knowledge [5, 6].

Therefore, based on the piano teaching method in music teaching, through the study of new diversified music teaching modes such as "micro-class" and "flip classroom" under the new media, the understanding of education and teaching reform under the background of new media information technology has been deepened. Through investigation, the practical application of music teaching methods under the new media technology in the actual teaching of colleges and universities in China has

been analyzed at this stage, and then some development suggestions have been put forward.

2. Methodology

As a new way of media expression in modern science and technology, new media uses computer, internet, mobile phone and digital network broadcasting to propagate information, and plays an important role in the innovation of music teaching field [7, 8]. Several ways to adapt to music teaching, promote the diversified development of music teaching and promote the innovation of teaching methods are expounded.

2.1. The innovative mode of "micro course" in the diversification of music teaching

Micro-course is a new type of classroom teaching resources with the development of new media. It cannot be understood as a reduced version of classroom resources alone, nor can it be defined as micro-course [9]. Using educational and teaching videos, some knowledge points that are difficult to understand or misunderstood by students in the classroom are integrated. Often through a 10-minute explanation, it can enable students to find problems, think about problems and then solve problems, which is more targeted, more targeted content [10, 11].

Previously, the specific application mode of "micro-lesson" as a new educational and teaching curriculum resource in music education and teaching is summarized into two levels. The first level is the production of video resources for "micro-lessons". Although the production process of "micro-lesson" is not very complicated, it has higher requirements for producers to form and produce an efficient "micro-lesson" video resource. This is reflected in the corresponding production of "micro-lessons" in the process, and its content should be closely related and based on the actual starting point for questions and explanations [12]. At the same time, production teachers also need to learn and master professional video editing software, and use precise words, simple examples, super logical thinking and good visual expression effect to present some difficult problems in music learning that students encounter in peacetime, as well as key problems that they cannot understand. Through the way of "micro-lesson" video induction, production teachers explain for students to understand. Secondly, the production of "micro-lesson" video is a link between the preceding and the following, which requires the production teachers to clarify the teaching ideas and plans of the series of "micro-lesson" production, which is reflected in the "micro-lesson" video. This will be more conducive to students' mastery of music knowledge and skills, and promote students' professional ability [13].

Secondly, with the help of "micro-lesson" education and teaching resources, the teaching cases of music singing and playing are analyzed accordingly. The specific measures are as follows. Music teachers in colleges and universities can integrate some famous music singing and playing videos into the teaching videos of "micro-lesson" education. By watching the videos, students can clearly feel the professional singing techniques, playing techniques and artistic treatment of famous music singers and performers, so as to help students to standardize their singing skills and perform actions. At the same time, in order to let students have a deep understanding of the true feelings expressed by the music, the organizers of the teaching can use the "micro-lesson" teaching to introduce students some background and stories of music creation, deepen students' understanding of music works, and thus enhance the effect of music learning [14].

2.2. The innovative mode of "flipping classroom" in the diversification of music teaching

"Flipping Classroom" refers to the new adjustment of the time inside and outside the classroom, and the transfer of the decision-making power of learning from the hands of teachers to the hands of students. Under this kind of teaching mode, in the precious time of class, students can be more attentive and initiative to explore their own problems in independent learning before class. Teachers are no longer "inculcators" of knowledge, but use collaboration and guidance methods to help students solve problems in communication, and make them get a deeper understanding [15, 16]. The application of "flip classroom" in music teaching mainly relies on "micro lesson", realizing the rational application of two new teaching resources in music teaching, namely "micro lesson" and "flip class". Educators can carry out teaching practice through the following two paths.

The first point is to innovatively optimize the teaching link settings of "flip classroom" through the production of "micro lesson" courseware. The specific operation is as follows. In micro-lessons, targeted video can be added to promote the optimization and adjustment of curriculum structure. Situational

introduction and classroom suspense are used to guide students to actively find and learn the teaching goals set in the teaching after class, and then deepen students' deep understanding of the target problem in the next classroom, and enhance interaction and communication. At the same time, the weak links of students' knowledge points can be found and effectively solved [17]. The second is to use the resources of "micro-lesson" to construct a good interaction of "flip classroom". The teaching resources of "micro lesson" can be used to trigger students' enthusiasm for learning and establish the relationship between students and students, students and knowledge. The form of free discussion and performance report is used to promote the classroom atmosphere, and then realize the good use of "flip classroom" [18].

2.3. Democratized teacher-student network learning and communication environment

With the close connection between music education and modern new media network technology, democratized new media platform for teachers and students to learn more is more conducive to creating a harmonious, equal and active interactive learning environment, and more conducive to the establishment of democratic learning and communication platform in colleges and universities. With the help of the new media network technology, the traditional teacher-student relationship can be changed, students' independent learning and cognitive ability can be highlighted, and the mechanical and passive learning mode can be transformed into the cooperative learning mode, so that students can strengthen their communication of piano music culture, playing skills and learning experience in this open network environment [19, 20].

Democratized music education not only promotes the equal communication and spiritual communication between teachers and students, students and students, but also makes the artistic thinking between teachers and students collide with the spark of the soul in the exchange and interaction, and achieves the teaching effect of drawing lessons from each other and complementing each other [21].

In a democratized teaching exchange environment, three principles should be grasped, namely, the principle of resource sharing, the principle of liberalization and the principle of teaching students in accordance with their aptitude. The principle of resource sharing calls for the democratic distribution of teaching resources and provides a resource basis for democratic piano music teaching activities. The principle of liberalization is that under the application of new media technology, the communication of music between teachers and students is free from the limitation of space and time, and they can learn freely. This principle also changes the characteristics of teachers' transmission-based teaching in the past, and more become the guider and assistant of students' music learning [22]. The principle of teaching students in accordance with their aptitude is embodied in the teacher's independent study of students in music teaching. E-mail, forum, micro-mail, micro-blog and other forms are used for equal communication and interaction, so that students can freely express their opinions and views on piano learning, so that teachers can carry out targeted teaching [23].

2.4. Video network display of competitive student music singing and performing

With the help of new media platform and mobile devices, the addition of contest-based video analysis teaching of students' music singing and playing can not only provide targeted teaching, but also help students learn from each other in close consultation [24]. This open competition environment can provide students with creative artistic practice platform, and let students show their talents in a strong competition atmosphere, choose their favorite piano music works, clear their strengths and weaknesses in practice, and effectively improve their psychological quality, so as to accumulate experience of stage performance for students [25].

2.5. Questionnaire survey

Based on the above four innovative ways of diversified music teaching, survey questions are designed. Three art colleges and universities are taken as objects, and students majoring in piano music are taken as subjects to explore the practical application of new media technology in music teaching in China at this stage. 150 questionnaires are sent out and 150 are collected [26-28]. There are 135 valid questionnaires. The corresponding eight research questions are set up. The details are shown in table 1 below.

Table 1. A list of the contents of the survey

Problem setting	Concrete content
1	What kind of piano music teaching methods do teachers usually use?
2	How do you interact with your teachers?
3	Do teachers often advocate some performance contest activities among students?
4	Do you show video of playing piano between shows on the internet?
5	Do you want the piano video to be reproduced online?
6	Will the new media Internet technology become the main development direction of piano teaching in the future?
7	Do you often collect piano playing learning materials from the Internet?
8	Have you ever heard or received piano lessons through "Micro lesson"?

3. Results and discussion

3.1. Investigation and analysis

This part is analyzed according to the above questions. The answer in question 1 is designed with five items, which are for multiple choices: group teaching, demonstration playing and explanation, creating situations using multimedia, using short video demonstration playing skills, group teaching and discussion inspiration. The results of the survey are shown in figure 1 and table 2.

Table 2. Number and percentage of teachers in different teaching modes

Option	Group teaching, demonstration playing and explanation	Creating situations using multimedia	Using short video demonstration playing skills	Group teaching and discussion inspiration	Other
Number of people	135	105	34	65	23
Percentage	100%	77.8%	25.2%	48.1%	17.1%

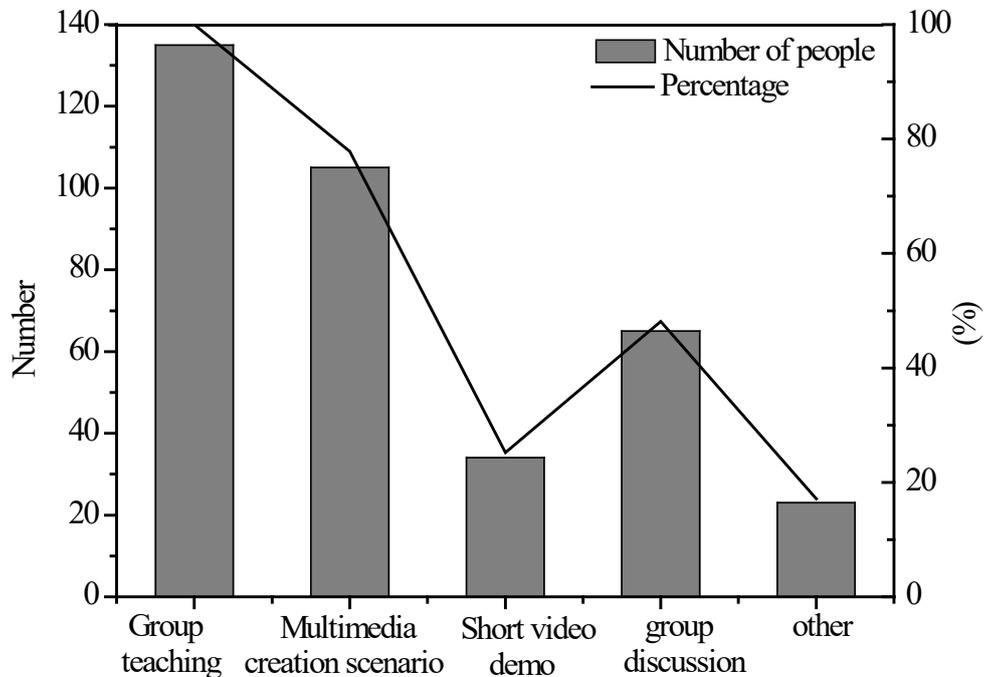


Figure 1. Number ratio and percentage of teachers in different teaching methods

From the chart, it can be seen that all colleges and universities use collective classes to teach. 77.8% of the students say that the teacher will use multimedia to teach students situational teaching. Short video

demonstration playing teaching has something in common with "micro-lesson". However, at present, the proportion of teachers in colleges and universities using this teaching method is the lowest, only 25.2%. It can be seen that the current music education and teaching for the use of new media less.

For question 2, the four options are set for single choice. They are classroom discussion and online communication after class. They are limited to classroom discussion and questioning. They ask questions in class or after class. They consult teachers privately through Weibo and Weixin. There is no communication, as shown in figure 2 and table 3.

Table 3. Major forms of interactive communication between teachers and students

Option	Classroom discussion and online communication after class	Only for classroom discussion and questions	Ask questions in class or after class	Privately consult teachers through Weibo and Weixin	No communication
Number of people	8	21	100	6	0
Percentage	5.93%	15.6%	74.07%	4.4%	0%

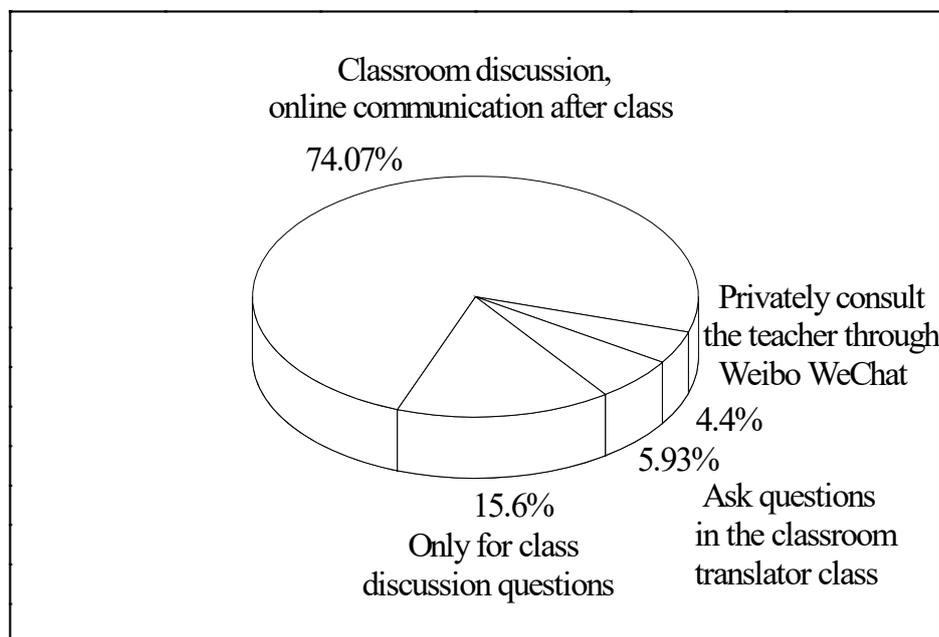


Figure 2. The proportion of the main forms of interaction between teachers and students

From the chart, it can be seen that interactive communication is very important in music teaching and piano learning. Few students do not discuss and interact with teachers, so it can be seen that the use of new media to increase the interaction of music teaching is a very correct choice. However, it is not difficult to see that the interaction between students and teachers mostly stays in the classroom or between classes. By means of new media, the proportion of discussing with teachers by Weibo and Weixin is relatively low, only 4.4%. It can be seen that the interactive communication teaching mode of new media music for students is influenced by the current music education mode, and the application is not very common.

For question 3, the options are set as usually, sometimes and never. Through investigation and analysis, it is concluded that only 26.7% of teachers will carry out performance competitions to enrich students' piano learning classes. It can be seen that in the current music education system, teachers generally lack more flexible teaching methods, as shown in table 4.

Table 4. Proportion of competition activities in classroom

Option	Usually	Sometimes	Never
Number of people	0	36	99
Percentage	0%	26.7%	73.3%

Question 4 options are set the same as question 3. As can be seen from table 5, most of the students

have not tried to communicate and interact with their teachers and classmates by conducting their piano works on the network platform.

Table 5. Proportion of uploading your own playing videos on the Internet

Option	Usually	Sometimes	Never
Number of people	12	35	88
Percentage	8.9%	25.9%	65.2%

In question 5, the four options are set up, which are very hopeful, relatively hopeful, not very hopeful and not hopeful. From figure 3 and table 6, it can be seen that most students are very willing to share their playing videos with others and share their progress with others.

Table 6. The proportion of students sharing their playing videos

Option	Very hopeful	Relatively hopeful	Not very hopeful	Not hopeful
Number of people	92	36	7	0
Percentage	68.1%	26.7%	5.2%	0%

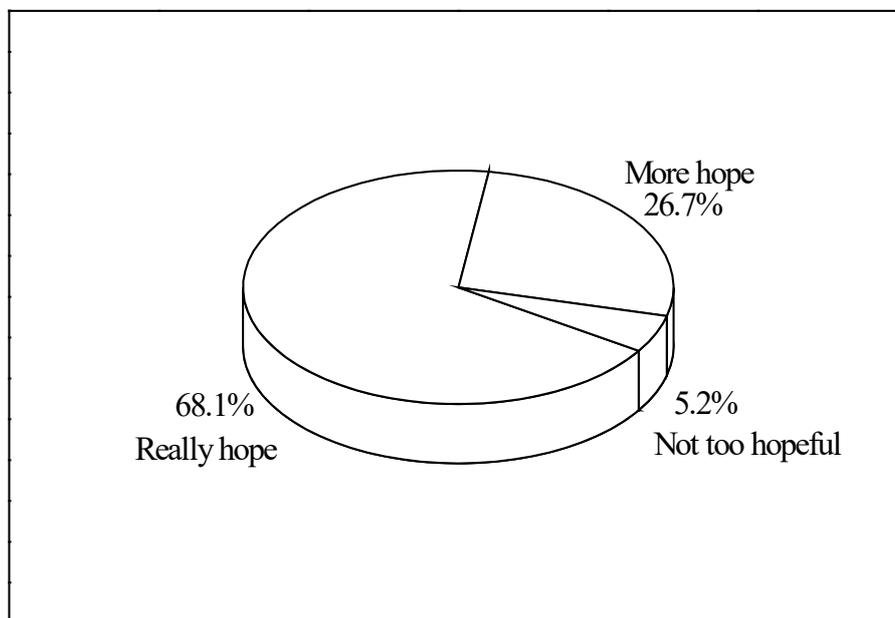


Figure 3. The proportion of students' willingness to share their playing videos

For question 6 and 7, four options and three options are set separately. For question 6, the four options are totally possible, more likely, less likely and impossible, respectively. The specific proportion is shown in table 7. The three options for question 7 are regular, sometimes and never, with specific proportions as shown in table 8.

From table 7 and figure 4, it can be seen that students' recognition of the new media as a way of music teaching is still very high, with 34.8% believing that it is entirely possible and 50.4% believing that it is more possible. It can be seen that students are full of expectations for music teaching methods under the new media. However, according to table 8 and figure 5, although students are full of expectations about the use of new media in music teaching, the proportion of using the Internet to obtain learning materials is not high.

Table 7. Proportion of new media accreditation as the main development direction of music teaching

Option	Totally possible	More likely	Less likely	Impossible
Number of people	47	68	18	2
Percentage	34.8%	50.4%	13.3%	1.5%

Table 8. Proportion of performance material collection in Internet search

Option	Usually	Sometimes	Never
Number of people	37	98	0
Percentage	27.4%	72.6%	0%

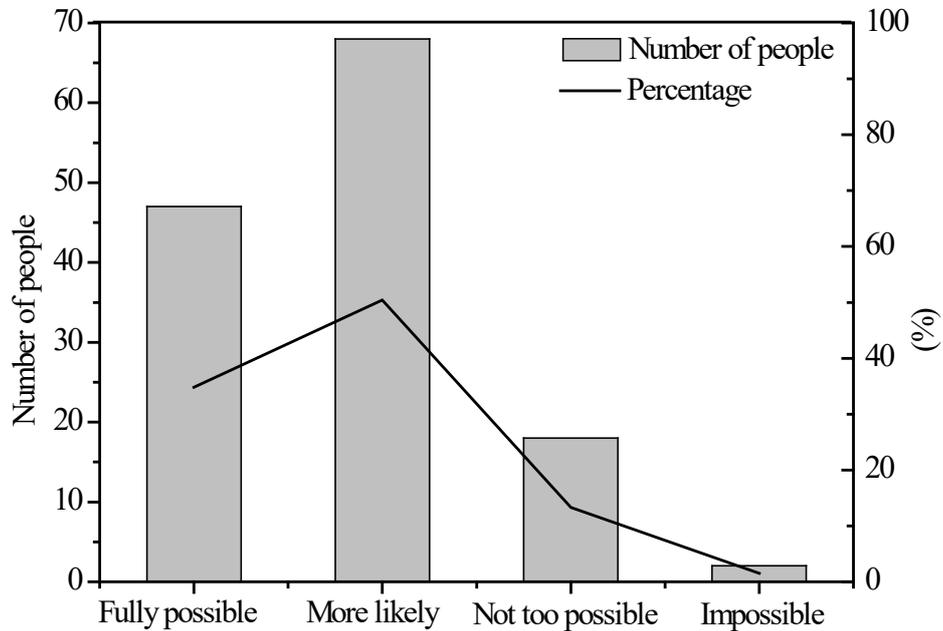


Figure 4. The proportion of recognition of new media as the main development of music teaching

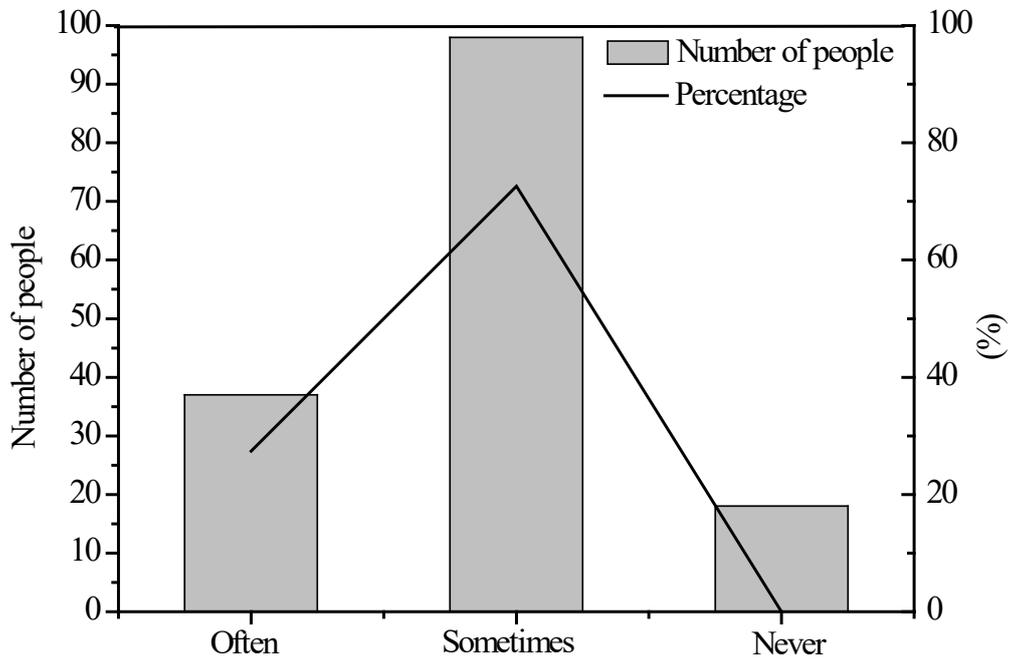


Figure 5. The proportion of students using new media network platform to find learning materials

In question 8, four options are set, which are teachers often use "micro-lesson" to teach, teachers occasionally use "micro-lesson" to teach, they have heard of it, but they have not received "micro-lesson" teaching, and they have not heard of "micro-lesson". The specific proportion is shown in table 9.

Table 9. The proportion of students who know and accept micro-lesson

Option	Teachers often use "micro-lesson" to teach.	Teachers occasionally use "micro-lesson" to teach.	They have heard of it, but they have not received "micro-lesson" teaching.	They have not heard of "micro-lesson".
Number of people	17	25	78	15
Percentage	12.6%	18.5%	57.8%	11.1%

From table 9, it can be seen that the proportion of piano lessons taught by teachers using new media "micro-lessons" is not very ideal. More than half of the students say they have heard of "micro-lesson" teaching, but have not contacted it. This further confirms that the development of new media under the current music teaching system in China is not very ideal in practical application.

3.2. Discussion

Through the above analysis, it can be concluded that under the current music teaching system in China, the actual use of new media has not achieved better results, and is still in the stage of development. However, teachers and students are full of expectations for the development prospects of piano music education under the new media. According to the above research, the problems that affect the application of new media and promote the diversified development of music teaching under the current education in China are summarized, mainly in two levels. One is that the orientation of music teaching has not been clearly defined in the current stage of music education in China, which leads to the lack of in-depth understanding of new media in colleges and universities. Secondly, the new media investment in music teaching is not enough at this stage. In view of these two problems, in this study, the current problems and summarizes four solutions are analyzed. First, it is necessary to make clear the trend of the times and orientate music teaching accurately. The diversified development and innovation of music teaching is not only the application of new media technology, but also the transformation of ideas, clear positioning, and the rush to play the teaching function of music. The second is to integrate the existing new media resources to carry out music teaching. In the new media era, media carriers are diversified, and music can not only rely on musical instruments to spread, but also rely on electronic devices to let music out of the classroom. Educators should recognize this and guide students to use new media resources for independent music learning. The third point is to enrich the form of curriculum. In the second part, the four kinds of diversified innovation can be applied. Fourthly, it is necessary to integrate teachers' resources and train professional and technical teams. It is necessary to retry the construction of literacy team, train teachers' professional ability, set up assistant groups on new media technology, train teachers on new media technology learning, and improve teaching quality and the good use of new media in music teaching.

4. Conclusion

Music has the function of expressing emotion and cultivating sentiment. The emergence of new media and its application in music teaching make music teaching in colleges and universities full of new vitality and tension. This kind of vigor is not only reflected in the fact that the advantages of technological advancement give students different classroom experience, but also in the fact that students are more enthusiastic about music learning, which promotes the reform and development of music education and teaching at the present stage and adds a new direction to the development of education in China. It can be said that the pluralistic characteristics and diverse nature of the new media music teaching methods, the combination of traditional and modern scientific and technological means, will expand the main position of students, achieve the sharing and practicability of music teaching, let students improve their understanding and mastery of music through mutual exchanges, and then better promote teaching results. Obviously, music teaching in line with the new media, with the help of the powerful communication and communication functions of the new media, will achieve leapfrog development, and become an inevitable trend of the future development of music education in colleges and universities. Therefore, facing the development trend of the new media environment, music education and teaching need to meet a time-oriented and directional reform, which, like other education, is from the outside to the inside, and from the inside to the outside. Ideologically, educators should change the traditional educational and teaching concepts and use new media technology to improve the quality of courses while developing their own skills. At the technical level, educators need to combine professional development with diversified innovation, optimize curriculum by using a variety of new media forms, explore their own

problems in the field of education and teaching at the present stage, summarize innovation, and achieve a perfect combination of knowledge teaching and new media technology curriculum system, so as to maximize the effectiveness of education and teaching.

In the new media era, four diversified teaching methods adapted to the development of music teaching have been explored. Through questionnaires, the actual situation of using new media teaching in Chinese universities has been explored at this stage, and four suggestions have been given, hoping to provide some reference and reference for the diversified development of music teaching and the practical application of new media technology in Chinese universities.

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