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Quantitative evaluation on teaching effectiveness of college music education with the introduction of computer technology

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ABSTRACT

With the rapid development of computer technology and network communication technology, the demands of different industries and departments for information of computer technology are growing at the same time. Therefore the traditional mode of education has failed to keep pace with the development of the times. In the colleges and universities of our country, especially in music education of the local colleges and universities, developing a multicultural music education is an important matter which will influence the future development of the college music education of our country. The present paper states the methods and ways to make a quantitative evaluation on teaching effectiveness of college music education when the computer technology is introduced in.

KEYWORDS

College music education; Computer technology; Teaching quality; Quantitative evaluation.



INTRODUCTION

Multicultural education is one of the hot educational issues in the world. It is not only a strong theoretical thought, but also a profound practical revolution. At present, most colleges and universities have spent more money on laboratory hardware equipment and infrastructure investments. However, the computer and network technologies are developing in a high speed, making the development of software fails to keep pace with that of hardware. Aiming at this problem, a part of colleges and universities have been, according to the requirements, making research on management software of the existed computer laboratory, while a large number of colleges and universities still has confusions in this respect. The laboratory management is still at the stage of manual operation, which has brought heavy work for management personnel, and makes the efficiency low. And errors may come out in the process of mass archiving and querying. Because management is most finished in the way of manual operation, files cannot be presented clearly as data to policymakers, which is unable to provide the scientific evidence for the decision-makings of the development of laboratory.

Ever since the dawn of teaching there is the teaching evaluation. Teaching evaluation is, on the basis of the teaching goal, to make judgment for the values of teaching and learning. And during judging process, scientific and feasible methods are adopted and the purpose is to promote the development of students. Teaching evaluation of different areas and different periods has different development process and experience.

The test is the main form of the examine system, to this day, which is deeply rooted in the thinking of Chinese and has a great influence until now. Test, as a traditional way of evaluation has a great deal of defects to make an evaluation by its own. And it has failed to meet the need of the development of the time. Using traditional written test to evaluate teaching has now difficulty in conducting a comprehensive inspection of students' learning situation. At this point, changes from the traditional teaching evaluation into the developmental teaching evaluation can promote the development of students better, and multi-agents participation in the evaluation will benefit the improvement of the teaching quality.

MUSIC EDUCATION IN COLLEGE AND UNIVERSITY MUST ESTABLISH THE CONCEPT OF MULTICULTURAL EDUCATION

Colleges and universities music education of our country differs a lot with the western multicultural music education in the aspects of implementation content, method, target, and so on. The platform is designed to make record of laboratory management, which is to make a collection of the standardized management documents which mentioned above in the article. This platform should not only meet the needs of the management work, but also be capable of recording the data produced during managing process, as well as automatically generating standardized management documents.

During the process of designing the platform, the different needs of different users of this platform should be given full consideration. In the view of laboratory equipment administrators, these users needs to track equipment initial information and using situation, and real-time monitor whether computer hardware in the laboratory is damaged and the software needs to be updated or not; In the view of the teaching managers, the users need the teachers to provide experiment plans, performances on computer and attendance of the students; In the view of teachers and students, these users need output the experiment plans, experiment analysis report and the final grade. After understanding the needs of the different users, we will have a clear impression on what kind of platform we will design. Having collected the information of requirements, we should put them into the laboratory daily managing work as the form of files. Thus, a filing management platform of computer laboratory can be set up.

Therefore, music teaching in colleges and universities calls for first-rate scholars and educators. Because, only the teachers with creative spirit, innovative courage, religious feelings, and wide wisdom teacher, are able to completely update education idea, change education thoughts, and completely abandon the concept of "monism". Therefore, they can build a multicultural music education in colleges and universities of China consistent with the multicultural international music education and explore to construct a curriculum system which is suitable for college music education.

FACTOR ANALYSIS OF MUSIC EDUCATION EFFECT EVALUATION WITH INTRODUCTION OF COMPUTER TECHNOLOGY

Usually, we operate the evaluation of classroom effect from the aspects of improving teaching effect, constructing market competitiveness and building teaching brand. Based on the investigation of the contents mentioned above, we can sum up the factors influencing the evaluation of classroom teaching, which are shown in TABLE 1.

Firstly, now in the colleges and universities, more and more attentions are paid to the teachers' combination strength of his or her personal ability and scientific research ability. So, the teachers are not necessary to graduate from professional, normal colleges, and have received comprehensive training system of classroom teaching. Although, several methods are used to make follow-up teaching, such as teaching preparation before class, systemic knowledge teaching during class, homework doing after class, and field practice. All of these methods can only be obtained through exploration and summaries by the teachers themselves, and it needs a lot of experience and practice and can not be accomplished in a very short time, which will directly influences the teaching effect. Secondly, the evaluation of classroom teaching is evaluated not only by the result of the examination results itself, but also by the multiple factors such as the advice of experts, colleagues and students. The experts and peers make evaluation through the fragment in the process of teaching. Therefore, it is uncertain, and is easy to cause partial evaluation for classroom teaching. Thirdly, due to the particularity of music teaching in colleges and

universities, it has different difficulties with other professional courses, which may directly influence the quality of the teaching effects. And there are some factors also should be considered in the teaching evaluation, such as courses number of the teacher and the number of the teachers. In the part of students' assessment, teaching evaluation results concluded through calculation by arithmetic average may also affect the entire evaluation results. Using traditional written test to evaluate teaching has now difficulty in conducting a comprehensive inspection of students' learning situation. At this point, changes from the traditional teaching evaluation into the developmental teaching evaluation can promote the development of students better, and multiple agents participation in the evaluation will benefit the improvement of the teaching quality. Fourthly, in classroom teaching evaluation, evaluators do not have a unified standard, and they make evaluations according to their own understanding of the evaluation index. But different evaluators have different understanding of the evaluation indexes, which leads to the differences in the evaluation. And in the evaluation, there lacks of effective communication between the evaluators and evaluated subject. And the problems existed in the classroom teaching will not be informed to the evaluated subject, leading to the fact that evaluated subject cannot express his/her opinion on the problem. This situation may also cause deviation to the evaluation of the effect of classroom teaching. Finally, the main purpose of the classroom effect evaluation is to make rewards or punishments. General process is to organize classroom teaching evaluation firstly, and after the result comes out, the result will be exhibited in sequence. However, the evaluated subject knows nothing about how the results came out or what problems existed in their teaching process. Never mention that they can improve their teaching lever or not. So, that the feedback mechanism is not perfect and sound is also an important factor influencing the classroom teaching evaluation. The situation of second classroom launching is shown as TABLE 2.

TABLE 1: Problems existed in music education (a survey of object1)

problems	schools
lack of funding	5
no attention from the school leaders	1
low teaching level	4
weak campus artistic atmosphere	3
backward in text, needing update the contents	4
unreasonable curriculum setting	4
lack of equipment	4
few opportunities for artistic practice	4
few artistic lessons in public class	4

TABLE 2: The situation of second classroom launching

activities	cultural shows	singing competitions (including Karaoke)	dancing competitions	music lectures	music training class	music comments or appreciation	concerts
Schools	6	6	3	3	2	2	2

The research objects of this article are sophomore students selected from two classes of English majors in department of music, and their music scores in the entrance exam showed no significant difference. In addition, according to the results of a-year-learning, it is concluded that the overall foundation ability of the two classes is weak, and students lack of interest and has poor autonomy in learning. Although getting good grades in the exams, they have the common faults of all Chinese students in music learning, namely, their speaking and listening grades are worse than written tests grades. Process evaluation was added to the evaluation of the music class effect for Class One, while the Class Two only has a terminal evaluation. Quantitative evaluation contains a listening test, written test and writing performance, at the same time the students' self evaluation and tracking evaluation of teachers towards students are included. Same teachers, teaching materials and course numbers are arranged for the two classes, to ensure the fairness of classroom teaching evaluation results.

A one-year research was conducted to the two researching objects. And quantitative evaluation is added to music classroom teaching evaluation for Class1. After the training, the students' abilities of listening, speaking, reading and writing have been improved to a certain degree. Besides, adding the quantitative evaluation to the training content, has increased interest in music teaching which lead to improve the students' learning autonomy. Instead of being afraid of music learning, students now can study actively, and have the courage to speak and write. Regardless of the grammar errors appeared in their speaking and writings, they have built the confidence of expressing their own ideas. On the contrary, Class2 still perseveres the old way of evaluation, namely the terminal evaluation. Students in Class2 Keep Listening and speaking ability of students inClass2 keeps in the same level with no significant improvements. And still they write in the originally cautious and backward way. The writing levels of the two classes are almost the same, while in terms of overall quality, the music level of

Class2 is obviously lower than that of Class1. The situation of college students' favorite musical Instruments is shown as TABLE 3.

TABLE 3: The situation of college students' favorite musical Instruments

instrument types	piano	guqin	guitar	flute	violin	erhu	total
number of students	101	37	132	42	56	44	412
Percentage (%)	25	9	32	10	14	11	100
ranking	2	6	1	5	3	4	

THE APPLICATION OF QUANTITATIVE EVALUATION IN MUSIC TEACHING WITH COMPUTER TECHNOLOGY

Through the above experiments, we can conclude that in music course, quantitative evaluation has its irreplaceable advantage. Firstly, according to the evaluation results, it is noticed that music course which added quantitative evaluation pays more attention to the overall progress of the students. Compared with terminal evaluation, quantitative evaluation has a more comprehensive theoretical structure. And it does not measure the students by a single rigid standard, but by their learning performances in different stages. Thus, this evaluation mode can promote the diversity development of the students, and improve students' learning initiative and enthusiasm. And the evaluation result is more convincing. Secondly, the process evaluation is not a one-time evaluation made at the end of the semester, but fused in the daily teaching and learning process which can reflect timely the problems and insufficiency in teaching process and can help teachers to correct their problems. And the error existed in students' learning can be corrected and the purpose of accomplishing teaching goal can be achieved. Thirdly, the quantitative evaluation also includes the self evaluation of the students. Different from the traditional terminal evaluation which reflects the learning results of the students from one aspect, the quantitative evaluation can make the students acquire the evaluations of their own from different aspects such as the students themselves, their classmates, teachers and so on. It is convenient for the teachers as well as the students to have a comprehensive understanding of the learning situation from different aspects and views. So, the results to the quantitative evaluation for the teaching effects are more convincing. At last, quantitative evaluation fused in the whole process of the teaching and is a effective combination of teaching and evaluation. The process of evaluating is, at the same time, a improving process of the deficiencies in teaching process. It not only benefits the teachers to improve their teaching methods, but also benefits the students to promote their studying.

Process evaluation although has its irreplaceable advantages, but also has some problems which can not be ignored, One the one hand, one purpose of the quantitative evaluation is to facilitate the teachers to timely acquire the learning situation of students, and adjust their teaching methods to improve the deficiencies through finding the problems. Thus if too much attention is paid to the function of the evaluation in the teaching process, it may cause troubles and confusions for the teachers. On the other hand, for learning changes of students should be reflected in evaluation, then too much evaluation is likely to disrupt the important points in learning process of the students. Therefore, how to master the intensity of quantitative evaluation has become an important problem in the process of its implementation. The situation of college students' favorite musical genre is shown as TABLE 4.

TABLE 4: The situation of college students' favorite musical genre

musical genre	symphony	string and wind music	concerto	percussion music	western opera, aria	Beijing opera	total number
number of students	123	82	104	49	21	33	412
Percentage(%)	30	20	25	12	5.1	8	100
ranking	1	3	2	4	6	5	

Besides, in quantitative evaluation, a problem should be paid attention to is that the justice of the evaluation and how to reflect the justice. In music teaching, we find that although quantitative evaluation is carried out in Class1, due to the differences in students' music level, study methods as well as their understanding of music, students make improvements in different degrees which lead to the dispute for the justice of the process evaluation. And just carried out in one class, the quantitative evaluation has caused such conflicts. Thus, if it is carried out in a group of more students, with the growing number of the participated in the evaluation, it is uncertain that all the students are capable of receiving such evaluation methods as quantitative evaluation.

The advantages as well as the limitations of quantitative evaluation in the music classroom teaching have been analyzed in above. In order to deal with its limitations, by trial and error, we research out the following several methods to improve the effectiveness of the process evaluation in teaching evaluation.

First of all, although the process evaluation has its irreplaceable advantage, we cannot exaggerate its advantages in the process of actual operation, and regard quantitative evaluation as the answer to everything. Not all problems appeared in teaching process can be solved by applying the quantitative evaluation into teaching process. In the actual teaching process,

teachers should see both the advantages and shortcomings of quantitative evaluation and treat this evaluation method with rationality. In the teaching process, we should develop our subjective initiative and control the intensity of the process evaluation, maximizing the advantage of this kind of evaluation in teaching process and minimizing its limits. Therefore the function of the evaluation can be produced to the greatest degree.

Second, as mentioned above, differences exist among each student. Some of the students improve learning ability and level fast in the process of evaluation, while some students do not have obvious improvements. It is normal to have differences in learning achievements and teachers should not treat this phenomena as a teaching problem. Instead, they should provide different learning methods for different students and improve the learning confidence of the students on the base of their improvements. Besides, teachers can help them make a clear and reasonable goal. By these ways, the teachers can achieve the final goal of teaching.

Finally, the quantitative evaluation has its advantages, but we also cannot ignore terminal evaluation which has a long-term development. After all, the terminal evaluation has its standardization after the long-term development, and attaches great importance to evaluation of teaching quality, having its meaning in the teaching evaluation. The difference between the two lies in the fact that quantitative evaluation pays more attention to the rational analysis of the students' progress, while terminal evaluation values the result of evaluation more. In modern teaching, tradition and development can be combined by fusing the process evaluation in teaching and combining with the terminal evaluation. By gathering the advantages of the two evaluation methods, we can evaluate the teaching process from different angles and evaluate the learning achievements of the students in different ways. In this way, the advantage of the teaching evaluation can be played out and the purpose of gaining better teaching effect can be achieved. The usual music listened by the colleague students is shown as TABLE 5.

TABLE 5: The usual music listened by the colleague students

musical types	popular music	western classic music	operatic aria	Chinese national music	traditional opera	Chinese folk songs	others	total number
number of students	407	296	17	123	21	153	7	1024
Percentage(%)	40	29	1.7	12	2.1	15	0.68	100
ranking	1	2	6	4	5	3	7	

CONCLUSION

During the long-term work of teaching evaluation, the traditional terminal evaluation has been widely used. But this evaluation approach has its shortcomings and the insufficiency. It focuses on results, and cannot to show the problems and shortcomings in the teaching process, failing to fully reflect the teaching situation of the teachers and learning progress of the students. Being fused in the teaching process, process evaluation can evaluate the teaching from different angles, levels as well as stages. It can timely reflect the problems and shortcomings existed in teaching process, thus making the teachers improve their teaching manners and deal with the problems easily. Besides, process evaluation can reflect the teaching effect of the teachers and learning achievements of the students objectively.

Two classes of music majors are selected to participate into the experiments in the article. The results of the experiments show that students, who have received the music teaching which is added with quantitative evaluation, have a certain progress in listening, speaking and writing. Meanwhile, interest of music teaching has increased. And students' learning autonomy have significantly been improved and their self-confidence of learning music has been set up. In contrast, students who receive the music teaching with old-fashioned terminal evaluation, show no significant improvement in their music level. In terms of improving the comprehensive ability, the effectiveness of quantitative evaluation is better than that of the terminal evaluation.

According to the results of the experiments, the advantages and limitations of the process evaluation have been researched in the article. And methods to improve the effectiveness of the teaching evaluation have been provided on the basis on the study of its limitations. And it has mentioned that process evaluation does not exist by its own. Quantitative evaluation should be combined with the traditional terminal evaluation, making a sustainable development of teaching, achieving better teaching purpose, and showing better teaching effect.

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