

Vocal Performance Major Grading System in College

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Abstract: Vocal performance scoring in colleges and universities is not only based on the students' ability to perform or singing status, but also on the subjective feelings of the scorers' personal understanding of the students' performances. In order to solve the shortcomings of the existing vocal performance professional grading system in colleges and universities, this paper discusses the types of vocal performance works and the calculation of logistic grading index weights based on the extraction and coding of grading target keywords and grading indexes and weights for the grading system. The experts' high scores were found to be in the range of 50%-60% for vocal performance, 40%-60% for vocal performance skills, and 10%-20% for live performance level. Therefore, the experts placed more emphasis on vocal performance scores than on skill and live performance levels.

1. Introduction

Cultivating professional artistic talents that meet their needs around the national vocal performance training goals has become a key part of the examination and curriculum reform of many higher education institutions in the art disciplines. In this regard, academic assessment, which has been neglected in the past, has started to receive more and more attention.

Nowadays, an increasing number of scholars have conducted a great deal of research in the scoring system for vocal performance in higher education through various technical and systematic tools, and practical studies have been made. Nazhat S A traces the development of J.S. Bach's aria style from the end of the Weimar period (1714-16) to his first year in Leipzig (1723-24). It provides criteria for distinguishing arias from other types of non-representational solo movements in Bach's vocal works, considers factors influencing the scoring of arias, examines the influence of the text on the aria form, and gives an overview of the structure of the Ritornelli. Different categories of aria form are investigated: strict da capo arias (A B A), free da capo arias (A B A); a detailed study of more than 200 Bach arias also reveals some remarkable patterns that suggest that Bach systematically explored the conventions of aria composition [1]. Torre, C, argues that the entrance examination for costume performance is an important part of the college admissions process and that its efficiency can not only reduce the waiting time of candidates and parents, but also reduce the work pressure of the exam staff and judges who are judging on site. The APP scoring system it introduces is one of the subsystems of the costume performance major entrance examination. It is designed and developed to combine the actual situation of our school's admissions and realize the

automation and informationization of the assessment work. Using the system, judges can score candidates by installing APP tablets, and the system can automatically aggregate and sort the scores in the background. The system has greatly improved the efficiency of the audition site assessment and has been used with good results in practice [2]. Telemaque D T suggested that the study of musical theater singing and musical theater literature performance be incorporated into vocal education for undergraduate vocal majors. In particular, when teaching undergraduate vocal students. The song repertoire should generally cover five categories that span the history of musical theatre. These categories are opera, contemporary popular music, contemporary classical music, the Golden Age, and music influenced by jazz. The five categories are also defined, and important composers and musicals in each category are outlined. Five songs from each category that are considered appropriate for undergraduate soprano voice majors are also examined and analyzed. The analysis of each song focuses on elements of vocal pedagogy, and it also outlines the specific vocal and stylistic elements of each song that contribute to authentic performance [3]. Although there is a wealth of existing research on scoring systems for vocal performance in colleges and universities, there are limitations to their use in real practice.

The purpose of this paper is to synthesize the research results and investigate the feasibility of implementing the evaluation method of different dimensions of professional scoring rules for vocal performance in colleges and universities in music performance, including the design of a discussion on the extraction and coding of key words for the evaluation objectives of vocal performance and the scoring index system, and the analysis of determining the weights of skill technique, expressiveness and clinical performance ability for the primary scoring index and the secondary scoring index, respectively. Finally, the professional rating system of vocal performance in colleges and universities was constructed from two aspects of rating rules and rating criteria, and the importance of experts to each rating index was analyzed by questionnaire survey.

2. Scoring System of Vocal Performance Majors in Colleges and Universities

2.1 Types of Vocal Performance Works

(1) Opera aria

Music performance majors in comprehensive colleges and art colleges usually choose American voice performance majors for their examinations, which require students to perform a Chinese or foreign song [4]. Among them, opera arias have become one of the teaching choices in many schools. Because most of the vocal schools usually require students' basic vocal ability to be high, while classical arias are usually mastered after a certain level of mastery [5].

(2) Art Songs

Art songs can express the richness of human emotions, and singing this type of songs requires expressiveness and complicated singing methods, and many art songs have become one of the types of vocal exams or teaching [6].

(3) Folk songs

Folk songs are a form of music and art that can express the life of people. The folk songs of our country are divided into Chinese and minority folk songs [7].

(4) Songwriting

A composition song is a work created through lyric writing and composing techniques, and a composition song is produced by an individual or group of lyricists and composers who have a name [8].

2.2 Logistic Weight Calculation

First, the standardized college vocal performance rating samples were divided into r parts, and the logistic regression models of r college vocal performance ratings were established respectively, and the indicator weights $k_v (v=1,2,\dots,r)$ of each model output were obtained, and the set of weights $K = \{k_1, k_2, \dots, k_r\}$ of r model output was obtained. 9 college vocal performance rating indicators obtained by attribute simplification were still used, and the indicator score of the x th model output was:

$$k_x = (b_1^x, b_2^x, \dots, b_9^x) \quad (1)$$

In turn, the weights of the nine college vocal performance major scoring indicators can be obtained $Q = (\theta_1, \theta_2, \dots, \theta_9)^M$. The score value of the x th model for the u th indicator is :

$$c_u = \sum_{x=1}^r b_u^x \gamma^x \quad (2)$$

Therefore, η_u is used to adjust the initial weights θ_u as follows:

$$\theta_u = \theta_u - \eta_u (u = 1, 2, \dots, 9) \quad (3)$$

In summary, we can obtain the weight $Q = (\theta_1, \theta_2, \dots, \theta_9)^M$ of the indicators of vocal performance in 9 universities.

3. Investigation and Research on The Scoring System of Vocal Performance in Colleges and Universities

3.1 Keyword Extraction and Coding of Scoring Objectives

The information coding we used was developed based on the goals and contents of the performance assessment of music performance majors. Specifically, the coding of keywords and key phrases involving the goals of academic expressive assessment was completed in two steps [9].

(1) In the first step, the key words and key phrases extracted before were "collected" according to different dimensions such as evaluation objectives and evaluation contents, and the serial numbers of the expert interviews were retained. For example, under the dimension of "the goal of academic performance evaluation of music performance majors", all the key words and phrases from "interview expert number" to "interview expert number" were collected together. The key words and key phrases related to "music performance major expressive evaluation objectives" were collected from "interview expert number" to "interview expert number" [10].

(2) In the second step, on the basis of the keywords and key phrases already coded, the words or concepts with the same theme in the keywords and key phrases were recapitulated with a new keyword with a higher degree of generalization, and then all the keywords and key phrases with the same meaning under the dimension were grouped under the new keywords. For example, in the dimension of academic performance assessment objectives, "sense of sound", "performance skills and techniques", "expressiveness", "performance skills", "performance skills and techniques", "expressiveness", "ability to play on stage", etc. all belong to this dimension.

3.2 Scoring Indexes and Weights

According to the type of vocal performance works and the content of the examination, the performance scoring indexes of higher education music performance majors are made and weighted in this paper [11]. The specific vocal performance scoring indexes and weights are shown in Figure 1.

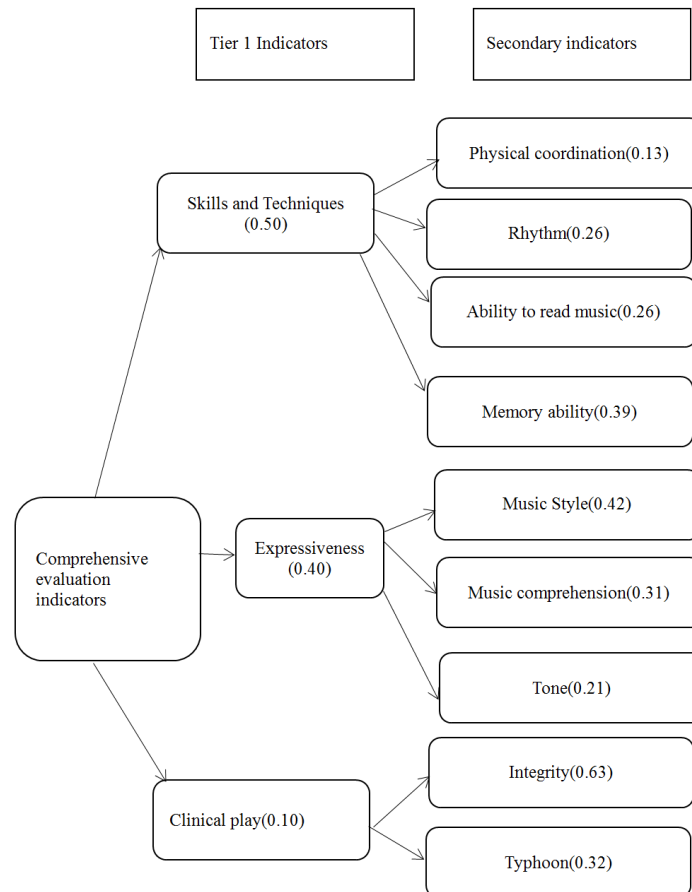


Figure 1: Evaluation indexes and weights

4. Research on The application of the Scoring System of Vocal Performance Majors in Colleges and Universities

4.1 Construction of the Grading System of Vocal Performance Majors in Colleges and Universities

(1) Scoring rules of vocal performance majors in colleges and universities

1) External image. The examination of vocal performance in colleges and universities mainly examines the candidates' height, facial features, physical appearance, temperament and other aspects. The main requirement is that students should have good features and proportionate body shape,

2) Voice condition. In the examination of vocal performance in colleges and universities, candidates are generally required to have clear bite, healthy and normal vocal organs, bright and clear tone, and certain plasticity of voice.

3) Singing method. Students are required to have the correct vocal method, good vocal habits, be able to change air freely and spit out words clearly. The main purpose is to understand whether the students are proficient in the skills of breathing and biting, and whether the basic skills are solid.

4) Music Performance. Students are required to have a certain performance quality, to be able to use Mandarin or foreign language to perform different songs more clearly, to be able to perform the emotion of the song, the pitch and the accuracy of the present, and to perform smoothly without obvious mistakes.

(2) Grading standards for vocal performance in colleges and universities

According to the students' overall performance, the grading standards are divided into the following levels.

1) Primary level: (60-69 points) ① Can perform the music at the primary level completely, with correct thoughts and emotions, vocal pitch and melody, and basic integrity of vocal spelling. ② Preliminary mastery of the basic skills of human vocalization and performance state. ③ can initially interpret the musical connotation, and master certain performance skills.

2) intermediate level (70-79 points) ① can be a complete performance of the intermediate level music, ideas and emotions, vocal pitch and melody is more correct, the basic integrity of the spit. ② Preliminary mastery of the basic skills of human vocal and performance state, ③ can carry out the basic vocal zone change.

3) sub-advanced level (80-89 points) ① can be a complete performance of the sub-advanced level of music, ideas and emotions, vocal pitch and melody is more correct, the spit is basically complete. ② can control the voice tone and strength. ③Can perform the basic vocal range change.

4) Advanced level (90 points or more) ①Can express the advanced level of music completely. Ideas and emotions, vocal pitch and melody is more correct, spitting basic integrity ② can control the sound timbre and strength. ③Can perform skilled vocal range change, and can sing resonance skillfully.

4.2 Application of the Scoring System of Vocal Performance In Colleges and Universities

Based on the opinions of the experts and the results of the questionnaire, we developed a questionnaire for the weighting of the primary indicators of the performance evaluation of music performance in higher education, which included the weighting of the scores of the primary indicators. In order to facilitate the statistics, the rounding method was adopted, for example, the score of the first level index of music performance skills and techniques was divided from 25.9 to 30. The statistical data of the questionnaire results are shown in Figure 2 and Table 1.

Table 1: statistical data of expressive evaluation

Score the content	Skills(Score)	Expressiveness(Score)	Clinical play(Score)
Minimum value	40	50	10
Maximum value	60	60	35
Average value	49.5	50	16

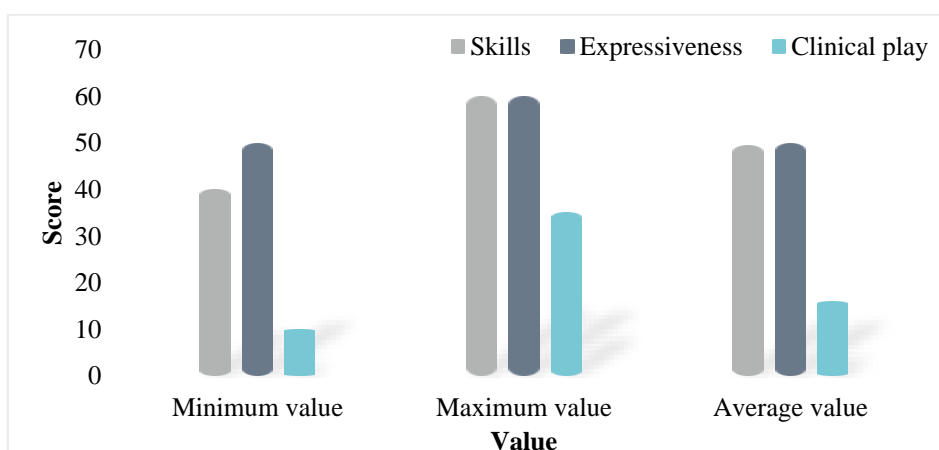


Figure 2: Statistical comparison of questionnaire results

The results of the questionnaire on the weighting of the first level of indicators for the evaluation of vocal performance in colleges and universities showed that the maximum value of the rating of vocal performance reached 60, the minimum value reached 50, and the average value reached 50. the maximum value of the rating of skill reached 60, the minimum value reached 40, and the average value reached 49.5. The maximum value of the rating of live performance level reached 35, the minimum value reached 10, and the average value reached 16. The maximum value for the rating of skill reached 35, the minimum value reached 10, and the average value reached 16.

5. Conclusion

This paper takes the construction of the vocal performance scoring system in colleges and universities as the main research content, composes and summarizes the types of vocal performance works and the calculation of Logistic scoring index weights, analyzes two key aspects of the vocal performance scoring index system in colleges and universities, extracts and codes the scoring target keywords, and proposes the specific direction of the system according to the key problems in the construction of the vocal performance scoring system in colleges and universities. In addition, it is found that experts pay more attention to the rating of expressiveness in the rating of vocal performance.

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