

# The Importance of Teaching to Control Musical Emotion in Music Performance

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## Abstracts

Since music education entered the pedagogy field, controlling emotions in music performance has been a problem that is easy to ignore. Many teachers prefer to impart professional knowledge while conducting music education, ignoring the guidance of emotional management of students during the performance. Excellent emotion management in music performance is a skill to manage the ups and downs of one's emotions to play one's performance level better. However, immature students, because they cannot better manage their own emotions and are affected by the ups and downs of emotions, many students cannot even play their original strength in the music performance, which is an unhealthy state. If teachers cannot give guidance and correction in time, they will leave serious hidden dangers and negatively impact their future development. This article highlights the importance of teaching to control musical emotion in music performance.

**Keywords:** The Importance of Teaching; Control Musical Emotion; Music Performance

## Introduction

*Musical emotion* is the emotion induced by music, which is the concentrated embodiment of music value. Different from ordinary emotions, music often induces personal pleasure experience.

Music emotion can be divided into broad sense and narrow sense:

- 1) The broad sense of music emotion refers to the influence of music works on people's emotions, such as pleasant, soft, lyrical, passionate, sad, and so on.
- 2) The narrow sense of musical emotion refers to the expression elements of musical works.

It is generally believed that the emotional effect of music is the main reason people engage in related music activities. Because of its extraordinary emotional power, music has been widely used in various fields, such as games, the film industry, marketing, and music therapy. However, scientific research on this phenomenon needs to be thoroughly understood. Currently, the research on music and emotion mainly wanders in the mainstream fields such as music cognition, music psychology, and music neuroscience. At the same time, many research methods are used to explore why and how music has such strong control over listeners. Before that, the most important thing for researchers is the ability of music to induce emotions. Among many emotion-inducing methods, music is one of the representative ways. Its particularity lies in

- 1) The success rate of music-induced emotion is higher
- 2) The emotion induced by music is more positive and specific, stronger in intensity and longer in duration, and increases the possibility of inducing positive and negative emotions with equal intensity
- 3) Some special emotions (such as trembling) induced by music can hardly be induced by other means
- 4) Music emotion not only includes simple perception and feeling but also emphasizes the evaluation and aesthetics of music emotion;
- 5) There were multiple parallel mechanism pathways and transmission modes in the process. Different induction modes or multiple pathways worked together with different music stimuli, individuals, and environmental factors.

Therefore, the relevant measurement results become meaningful given the particularity of music-induced emotion. Using music to induce emotion is an effective and unique way. This paper systematically compares self-reported, psychophysiological, and functional neuroimaging measurements of music-induced emotion. It expounds on a method of emotion measurement based on a music-specific model. This paper summarizes the factors that affect the measurement of musical emotion from three aspects: the choice of musical stimuli, the characteristics of listeners, and the characteristics of situations. In order to ensure the accuracy of measurement, it further proposes solutions such as determining the consistency of theoretical models, combining multiple methods, using effective stimulus materials, carefully evaluating situations and participant characteristics, and clarifying the research trend in this field (Yu et al., 2014).

## **The Measurement of Music Induced Emotion**

Measuring the emotional response to music is a challenging study because the way to obtain an emotional response and the design and development of these ways is dynamic. There are two kinds of emotions related to music: the recognition and judgment of emotions expressed by music, and the other are emotions induced by music. The type of music emotion involved in this study is music-induced emotion, which is the emotion aroused by music and experienced by individuals from the perspective of human subjects.

Using the literature analysis method, the literature of SCOPUS, WOS, JSTOR, ProQuest, and other databases in the past 30 years was collated, analyzed, and summarized. The measurement methods of music-induced emotion are mainly divided into self-report scales, behavior measurements, psychophysiological index measurements, and functional neuroimaging measurements. This study summarized the characteristics and advantages, and disadvantages of each measurement method in the actual measurement and then analyzed the basic concept confusion, single dimension of the measurement method, lack of theoretical paradigm, and other problems in the measurement of music-induced emotion at the current stage, and based on this, put forward research suggestions and prospects on measurement issues in the field of music-induced emotion research in China.

In terms of measurement methods, the past research was mainly carried out in four ways: the first way involves the subjective experience of individuals induced by music, which is usually measured by a self-report scale; The second way is related to the behavior tendency naturally generated when individuals listen to music, which can be measured by direct observation of explicit behavior (such as facial expression and posture); Mode 3 is related to

the individual's internal balance (body stability) and adaptation, and monitors the changes of peripheral physiological indicators; The fourth way is to measure the neural activity that reflects the music emotion processing of the central nervous system. Through brain imaging, we can obtain the interaction between the processing of music emotion and music cognition in each brain region (Zhang & Yin, 2017).

### **Inducing Musical Emotion and the Related Thinking of Music Education**

The research on the relationship between music and emotion, especially the mechanism of inducing music emotion, has always been a hot topic in music aesthetics, psychology, and music education. This article attempts to briefly explain the relative authoritative theory of the mechanism of inducing musical emotion from the perspective of musical aesthetics and music psychology and also to express the thinking on music education on the premise of taking one of the mechanisms of musical expectation as an example (Kong, 2022).

Through reading the above literature, we can easily find that music emotion is an extremely complex emotion, and it is not easy to control it. To summarize, to understand music's emotion, we must clearly distinguish between "affect" and "emotion." Theoretically, the effect is a broad concept involving valence (positive or negative) and state. Here, emotion is one of its states. Emotion is a short and strong emotional reaction, including objective feelings (mood), physiological arousal, expression, behavioral tendency, and synchronous regulation. It is targeted at specific objects and can last from a few minutes to a few hours. Take family love as an example. Family love belongs to a wonderful emotion, but there will not be only one emotion in this kind of emotion. However, there will be many kinds of happiness, anger, and sadness. Therefore, the study of music emotion is of fundamental significance. It is closely related to music's emotional experience, aesthetics, and education.

### **The Influence of Music Cultural Experience on Music Emotion Processing**

Music is an important medium for human emotional communication. The extent to which people's understanding and feelings of musical emotions depend on musical and cultural experience has always been a major scientific issue. Music is not only the product of evolution but also the product of society. Therefore, it has biological and cultural significance from the perspective of biological view. It is believed that the biological significance of music at least includes sexual selection, social cohesion, mother-infant communication, and rhythm adaptation. On this basis, the emotional connection generated becomes an adaptive mechanism to promote individual survival and development, which is present in the innate response of human beings. Therefore, the audience's understanding and feeling of music's emotion need not be based on experience acquisition. From the perspective of cultural perspective, it is believed that, in a broad sense, musical instruments, scores, and musical forms. Music is all unique cultural products gradually formed by a certain group of ethnic groups in the process of social development, bearing a collection of characteristics different from other groups, such as belief, behavior, dialogue, social organization, and interaction. In a narrow sense, music is a symbol rule system gradually formed in the development process of cultural group characteristics. The connection between rules and meanings is specific, deep, and abstract. The decoding of rules is based on relevant experience and knowledge Groups growing in a certain

culture (such as a certain regional culture group) gradually acquire the knowledge of the rules of expression of the music culture system, implicitly or explicitly, during the experience accumulation of listening to music within the culture and form a unique music culture schema. On this basis, they construct the corresponding emotional meaning of music symbols. Therefore, the audience's understanding and feelings of music emotions are empirically dependent. The dispute between the biological and cultural views can be explained as whether the experience of music culture and the related cognitive construction process are the important conditions for the connection between music and emotion. However, due to the complexity of musical events and emotional reactions, the construction based on a musical and cultural schema cannot be the only way to connect music and emotion. The influence effect of musical and cultural experience cannot show a single feature. As a result, the debate between the biological and cultural views has gradually evolved into a moderate view with an intermediate orientation, recognizing the coexistence of different mechanisms and turning the research focus to exploring the mechanism and weight of the effects of musical and cultural experience under different conditions. It has been considered that the cognition and experience generated in the process of music emotion include different levels of connotation, such as music emotion perception, music emotion experience, and music preference. Different levels of connotation involve different emotional content and emotion generation processes, in which music and cultural experience also show different mechanisms and characteristics. This paper combs the theoretical explanations of the current research on the experience effect mechanism of music culture from three aspects: music emotion perception, music emotion experience, and music preference, lists and comments on relevant experimental examples, and finally put forward thoughts and prospects for future research from the perspectives of music culture experience, music, and emotion (Ma et al., 2017).

## **Effect of Music Choice, Listener Personality and Context on Musical Emotion**

Musical emotion refers to the emotional response induced by individuals under the stimulation of music. The model of music cue consistency points out that the representation of music symbols within the listener must be consistent with the representation of music symbols within the creator to achieve effective communication between the listener and the music. On the whole, the occurrence of music emotion involves four factors: the characteristics of clues generated in the creation process of music, the characteristics of music in the performance process, the characteristics of listeners themselves, and the situation of listening to music. These four factors and their interaction make the music mood complex and difficult to control. The complex structure of music inspires this study, and the countless links between its emotions and attempts to explore whether individuals with different personality traits have different emotional responses to different music under different situations, including exploring the impact of music valence types and music choices on music emotions, changes in music emotions under interference or focus situations and possible interactions with music factors. The author's experiment also focused on personality factors but did not focus on certain specific personality characteristics, but comprehensively considered the factors that may affect music emotion among the five personality factors. The study included a preliminary experiment and two music-emotion experiments and collected the subjects' emotional self-evaluation data, physiological data, and personality questionnaire data.

Through the preliminary selection and evaluation of materials, the preliminary experiment screened and matched 40 positive and negative list music and 20 positive and negative random music, each lasting 60 seconds. Music editing software controlled the sound intensity, sound quality frequency, bit speed, and other factors of music materials. The familiarity and liking of the music on the list are significantly higher than those of random music, and the potency score of positive music is significantly higher than that of negative music. There is no significant difference in the arousal of the materials in each group, which indicates that the screened materials can distinguish between positive and negative potency levels from the perspective of object emotion, and the manipulation of music selection is also effective. The arousal is well controlled as an irrelevant factor. The music materials in the author's experiment are randomly selected from the online music list and music library, avoiding the personal preference influence caused by choice of music by the subject. Experiment - using 2 (music potency)  $\times$  2 (Music selection) In the subject design, the influence of music valence type and selection on music emotion was investigated. The dependent variable indicators were mainly the self-reported emotional intensity of the subjects and the physiological arousal indicators of the subjects in the process of listening to music. The results showed that: (1) The popularity and familiarity of self-selected music were significantly higher than those of random music; The positive music potency score was significantly higher than the negative music, which proved that the music evaluation and screening operation in the pre-experiment was effective. (2) Two-factor analysis of variance showed that positive music induced stronger emotions than negative music; Self-selected music induces stronger emotions than random music, and there is an interaction between them. Physiological data partially support this conclusion. (3) The subjects' extraversion scores were positively correlated with emotional valence scores, neuroticism scores were negatively correlated with emotional valence scores, and openness scores were positively correlated with emotional intensity scores. These results were consistent with the conclusions of previous studies on emotion and Big Five personality, indicating that the relationship between musical emotion and personality was in line with the general law. Experiment 2 adopts 2 (music potency)  $\times$  2 (music selection)  $\times$  2 (Situation) Mixed design, adding a disturbing situation factor, examining the influence of music valence type, music choice, and the situation on music emotion, and the possible interaction between them. Since the first experiment was conducted in an environment that excluded cognitive interference, the data from the first experiment will be taken as the focus group. In contrast, the second experiment will only collect the data of the interference group, and then the data of the two experiments will be summarized and analyzed. The interference operation in experiment 2 requires the subjects to find all capital letters A from a letter array picture and report their number while listening to music. The other experimental procedures are the same as experiment control and experiment 1. The results showed that: (1) Music selection effect was significant. Self-selected music induced a stronger emotional response than random music. This effect was supported by skin electrical response and heart rate data; (2) The main effect of the situation is significant. Listening to music in interference induces stronger emotions than in the focus situation. The data on skin electricity and heart rate support this effect. (3) The interaction between music selection and context is significant. Self-selected music induces stronger emotional intensity in the interference than in the concentration context. In contrast, random music the contrary induces stronger emotion in the concentration context than in the interference context. (4) The correlation between personality

and emotional valence found in experiment 1 under the condition of concentration did not reach significance under interference, indicating that the correlation between personality and musical emotion may be affected by cognitive interference. Based on the results of Experiment 1 and Experiment 2, the following conclusions can be drawn: (1) The valence type of music materials significantly impacts music emotion. Positive music has a stronger emotional intensity than negative music, but this conclusion may only exist when the music genre is pop music; (2) Music selection has a significant impact on music emotion, and the emotion intensity induced by the music selected by the subjects is stronger than that induced by random music; (3) The situation has a significant impact on music emotion, and listening to music in the interference situation is stronger than the emotion induced in the focus situation; (4) The effects of music selection show opposite trends in the two situations: self-selected music induces stronger emotions in the interference situation than in the concentration situation, while random music induces weaker emotions in the interference situation than in the concentration situation; (5) In the attentional situation, the subjects' neuroticism and extraversion scores are related to the emotional valence, and openness is significantly related to the emotional intensity, but the above correlation is not significant in the sub mood situation, only the friendliness is significantly related to the emotional intensity, which may indicate that the correlation between personality and music situation needs a specific situation to be established. In general, the innovation of this study is that the subjects are required to choose from the materials that have participated in the evaluation to balance the contradiction between the excessive interference factors of music materials and the freedom of self-selected music to the greatest extent; The innovative introduction of cognitive interference factors and the investigation of the differences between music emotion and listening to music attentively when music is used as the background in daily life is also conducive to understanding the differences that may exist when individuals listen to music with different options in different situations, which is of practical significance. In addition, the author believes that the research on the relationship between cognition and emotion is an important supplement (Lu, 2014).

## **The Function of Psychological Adjustment of Music Education**

The function research of music education is an important part of the basic theoretical research of music education, which affects the positioning of the basic nature and value attributes of music education. It also effectively affects the teaching practice of music education. The research on the function of music education in China has made slow progress in the wave of global education reform, which is mainly reflected in the following aspects: emphasis on theoretical speculation and neglect of empirical process in research methods; In terms of research approach, more education-based perspective, less personal experience perspective. Based on this, this research takes music education activities to induce positive emotions as the realization approach. It adopts the mixed method of quantitative laboratory research and qualitative intervention research to achieve the psychological adjustment function of music education. This paper comprises five parts: introduction, research basis, research subject, findings, and conclusions.

The first chapter is an introduction, which mainly describes the research background and the origin of the problem, research problems and ideas, research methods, research values, and innovations of this study. Focusing on the research theme, the core question raised in this study is: How does music education realize the function of psychological adjustment? In order

to answer this core question, we need to further refine the core question into a series of specific questions: What is the realization mechanism of music education inducing positive emotions? In music education activities inducing positive emotions, how do you make personalized music choices? In the process of music education activities inducing positive emotions, how to choose a personalized music listening mode? How to construct the model of psychological adjustment function in music education? How can the psychological adjustment function of music education realize its educational value? In order to solve this series of specific problems and core problems, the choice of hybrid methods becomes crucial. In terms of the specific implementation, mixed method research combines quantitative and qualitative research, which can obtain sample data through the former to explore the relationship between variables and add an individual perspective induced by positive emotions into the real-life situations created by the latter. Mixed method research can put the research on the function of music education in a more comprehensive perspective, not only giving more personal experience details to scientific experimental data but also ensuring the scientificity of the selection of measurement tools, subject selection, and data statistical analysis in the process of individual experience exploration.

The second and third chapters discuss the research basis, including the overview and theoretical basis. The second chapter reviews the literature from the two aspects of music education function research and music activity-induced emotion research. The content reflects the literature collection, collation, analysis, and review process. According to the research status quo of music education function and music activity induced emotion at home and abroad, the discussion focused on measuring music emotion. The topics focused on the reasons and mechanisms for the inconsistent results of music-induced emotion measurement and the validity of music activity-induced emotion measurement results. The third chapter focuses on the philosophical and aesthetic basis, the psychological and physiological basis, and the cognitive neuroscience basis, which provides the source of ideas and theoretical support for implementing the following research subjects.

The fourth to sixth chapters constitute the main content of the study, which is the specific implementation process of the mixed method of music education psychological adjustment. The fourth chapter focuses on the quantitative research stage of the psychological adjustment function of music education. The laboratory experiment is used to explore the music types and music listening methods that are conducive to inducing positive emotions. A multi-factor, completely randomized experiment is designed. The subjects accept four experimental conditions, of which condition I represent soundscape music  $\times$  Abdominal breathing, condition II represents non-soundscape music  $\times$  Abdominal breathing, condition III represents soundscape music  $\times$  Chest breathing, and condition IV represents non-soundscape music  $\times$  For chest breathing, the independent variables of the experiment were two levels of music type and listening style. The dependent variables were four physiological indicators: skin electricity, skin temperature, heart rate, and muscle electricity. The measurement results were presented interactively through a self-report scale and physiological measurement. The fifth chapter belongs to the qualitative research stage of the mixed method of psychological adjustment function in music education, focusing on the following questions: How do music types and music II listening styles affect individual physiological indicators? What are the causes and mechanisms? How can individuals carry out personalized music self-education with the psychological adjustment in daily life? According to the principle of "nested relationship

sequential occurrence" in the sample design of the subjects in the mixed method study, three subjects were selected from the subjects in the quantitative research stage to continue the qualitative intervention study. Through individual interviews and the analysis of the representation of the subjects' emotional regulation problems, the subjects were guided to seek personalized emotional regulation strategies with the help of music education activities. The sixth chapter analyzes the results of the quantitative and qualitative intervention research. It concludes the factors that affect the realization of the psychological adjustment function of music education: individual factors, music noumenon factors, and music listening methods.

The seventh chapter is the research finding's part. Based on the research subject consisting of the quantitative stage of the experiment and the qualitative intervention stage, the model of the psychological adjustment function of music education is generated. The content of this chapter includes the construction of the model of the psychological adjustment function of music education and the prospect of the educational value of this model.

The eighth chapter is the conclusion, which mainly explains the research basis, research subject, and main points and results of the research findings in the previous article. It explains and clarifies the deficiencies of this study and the future research prospects (Zhang, 2017).

## **Research on Psychological Problems and Countermeasures in Music Performance**

*Music performance* is a creative artistic activity determined by the characteristics of art itself and is an indispensable link between music and art. In music performance, the performer's music performance results and quality are affected by many factors, and psychological problems are relatively important. The psychological problems of music performance involve the performer's understanding of the music itself, the performer's and the performer's talent. That is to say. When a music performer has a psychological problem, it cannot be effectively overcome. He needs the guidance of a professional tutor to help him out of the psychological misunderstanding and continue to explore the internal law of music performance art. The article explores psychological problems and countermeasures in music performance (Ma, 2020).

## **Conclusion**

Reading the above literature, we can learn that if you want to control musical emotion in performance, you must first control your psychological state; immediate psychological adjustment is the key to mastering musical emotion in the performance. Secondly, personal personality and complex surroundings directly or indirectly affect music's emotions. If a person's personality quality is low, he cannot master noble music emotion well; Or the surrounding environment is noisy and disorderly, which will also have a huge impact on the control of quiet, melodious music. In addition, being in an environment for a long time greatly impacts personality. A good environment can promote a good personality, which also helps to grasp excellent music emotions. 3. The cultural experience of music affects people's ability to control musical emotions. In areas with excellent music culture, it is always easier for people to understand music's emotions. The inheritance and development of music culture will enable more people to understand and participate in it. People in different regions always find it easier to understand the music emotion contained in the local music culture. However, it takes more time to understand the emotion in the foreign music culture.



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