

# How to Coordinate Audio, Touch and Vision in Piano Performance Teaching?

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**Abstract:** Piano playing, as a kind of advanced sports behavior of human beings, is a kind of extreme enjoyment in the feeling and spiritual world, and piano playing is mainly participated by tactile, visual and auditory senses. How to effectively use all kinds of sensory systematic coordination in practical piano playing is the focus of research. Piano playing as one of the most popular and popular musical instruments, how to do a good job of piano playing teaching has always attracted much attention. This paper first summarizes and analyzes the vision, hearing and touch in the current piano playing teaching, analyzes and discusses its three aspects of teaching, and finally aims at how to put the piano into practice. The cooperative teaching of hearing, vision and touch in playing is discussed and analyzed to improve its actual playing level and playing quality, so as to provide some data for the active and effective development of piano teaching activities at present.

## 1. Introduction

Piano, as the king of musical instruments in the music family, in recent years, with the continuous improvement of people's living standards, piano as one of the most popular musical instruments in the world, learning piano has become a popular trend, piano playing is relatively difficult. High quality piano playing teaching must pay attention to the coordination of learners' auditory touch and vision in the actual teaching process, so as to promote people to better integrate into piano music, and thus constantly promote learners to integrate into emotion. Complete the piano performance with real and high quality[1].

## 2. An Overview of hearing, tactile and Vision in Piano performance Teaching

### 2.1 Piano playing hearing

Hearing is the real psychological response of individuals to the physical properties of music sound waves. At the same time, it is also the real reaction of the individual to the music language. Sound loudness pitch and tone color are the three main components of hearing. No matter what kind of music it is, it is composed of three main components: timbre, pitch and loudness. Music as a kind of auditory art, playing hearing as a basic type of music hearing. Music is relatively a kind of auditory art, playing hearing is a branch of music hearing, which emphasizes whether the performer can accurately judge the rhythm of playing. Playing hearing can be divided into internal and external auditory parts. And the external auditory part, in which external hearing mainly refers to the use of their own ears to recognize other sounds, external music sound recognition, which is also the key way for players to sense their own beat changes[2]. Inner hearing refers to a comprehensive ability of the performer based on the accumulation of sound and the experience of playing, which is very similar to the "success of the mind" in art painting. That is to say, the performer has heard the result and the sound he will play in the actual piano playing. The inner auditory ability includes the player's sound of the musical work, the effect of harmony, the change of texture, and so on. The design of the master plan of many factors, which is an integrated presentation of the performer's imagination in the performance of the piano works.

### 2.2 Play touch

What is touch? Touch is the general term for mechanical stimuli such as contact, sliding, or

pressure perception, in the actual performance of piano music. Playing tactile refers to the actual press pressure of piano keys and the overall touch and perception of the strength and amplitude of the piano keys and pedal skills in the actual music training. Only by constantly having a good sense of touch can the performer accurately control the keystroke mode and the strength of the case when playing music, thus showing the different emotions and emotional changes of different composers through different piano key playing.

The actual performance tactile of the piano is divided into five different performance techniques, which are sound scale, double tone, octave and chord and large jump. The emotion of different performance tracks is different and the picture of its description also exists. Therefore, it is very sensitive to the player, and it also has high sense system coordination[3]. Although the active structure of piano performance is very simple, it is mainly divided into two types:key and pedal, but the overall performance requires the performance of the player's fingers and the integrated coordination of wrist and arm, shoulder and leg as well as the whole body.

### **2.3 Performance vision**

As a physiological word, vision mainly refers to the critical role of gathering information in the course of people's beginning to understand everything outside world and conduct activities. For piano performance, vision can help players understand the overall structure of the tracks they need to play, thereby identifying the music information on the score. In the actual performance, the performance state of itself is constantly changed and coordinated by observing the position of the key, as well as the finger and the hand type[4]. Good performance can not only cause the player to observe a lot of notes, but also can help the player obtain the necessary performance information, thus forming in the piano player's mind. The whole music segment, even outlines the music picture, presents the certain memory vision through the film return visit form, thus unceasingly helps the performer to realize the piano repertoire own perfect performance.

## **3. A study on the Application of Vision, hearing and tactile in Piano playing**

### **3.1 Research on the Application of hearing in Piano playing**

Piano as a kind of music art, hearing is the most basic and important sensory system, in which the subtle changes of syllables and tones can not appreciate and play the music art of piano without enough auditory ability to distinguish. Physiologically, hearing is one of the most sophisticated regulators. For piano playing, its hearing is very important. In practical teaching, piano teachers should focus on listening training for students. A pair of ears with strong resolution can correct the errors in learners' actual performance in time[5].

### **3.2 Research on the Practical Application of Vision in the Piano Teaching**

For skilled pianists, they can temporarily ignore their own visual effects in the actual performance, but for beginners, vision is the key to their perception and disintegration of the environment. In the process of learning, vision is as important to its function as hearing. Learners need to recognize the spectrum with the help of their eyes, and abandoning the dark will take their vision as the center to practice and learn. As a result, learners are urged to devote their whole energy to playing piano level 10.

### **3.3 The practical Application of tactile sense in Piano Teaching**

It is the basic purpose of the learner to study the piano, and therefore it is necessary to play a passionate and generous work, which requires the player to be full and full of emotion, and the basis of the culture is our sense of touch. As to the need for the haptic, it needs to be accumulated with time and experience, thereby increasing the art of the piano playing[6]. In the actual performance of the later stage, with the gradual familiarity of the touch, the learner will be gradually skilled in the use of the tactile sense, thereby enjoying the beauty of the piano music, so that the touch in the actual piano playing should cooperate with the actual regulation of the hearing to perform the piano playing.

120 volunteers were selected as the research object, 120 questionnaires were sent out, 117 questionnaires were collected, and 100 valid questionnaires were collected. Their own preferences for communication modes were analyzed and discussed. Thirty-eight percent of the volunteers said that they preferred hearing, which was the key to human perception of the beautiful world and music; forty percent of the volunteers preferred touch, which was crucial in actual piano performance; the performers mainly completed the piano performance through touch; the remaining 13 percent preferred vision, which could help the performers. See the keys of the piano so as to play better. The remaining 9% of the volunteers believed that the coordination of the three senses was very important and that only the coordinated development of the three senses could produce wonderful music. The actual results of the survey are as follows:

Table 1 Performance Results of a survey on volunteers' preference for communication

| Sensory system           | Number of actual surveys | Survey percentage (%) |
|--------------------------|--------------------------|-----------------------|
| auditory system          | 38                       | 38%                   |
| vision system            | 40                       | 40%                   |
| Tactile system           | 13                       | 13%                   |
| Triesthesia coordination | 9                        | 9%                    |

### 3.4 The Synergistic role of hearing, Vision and tactile in practical Piano playing

Piano playing is an artistic behavior that needs to be carried out wholeheartedly. Simple coping with it will lead to noise, and can not make the audience and the actual performers enjoy the charm of music[6]. As a result, the various sensory systems of the performer should be actually combined to achieve the optimal and most appropriate collaboration under the control of the brain and the body. This harmonious mode of cooperation needs to rely on relative playing experience. This is the key link to realize the self-regulation of the human body.

Piano playing has a high standard of skill for the performer. In order to continuously improve the playing level of the piano, ah, learners themselves, it is necessary to do a good job in the teaching of music playing hearing and the collaborative teaching of vision and touch. Only in this way can we constantly ensure that learners master excellent and skilled piano playing skills, and integrate their own emotional experience into piano performance, so as to continuously improve the learners' own playing level and performance quality[7].

### 4. Analysis on the Synergistic effect of three senses in Piano playing

In the actual performance of the piano, the music hearing of the audience is continuously stimulated, the ideal timbre is finished in the actual performance, and the piano player must complete the work. The timbre of the piano is mainly the pitch generated by the vibration of the string, which is composed of the multiple tones on the pitch, and different key modes can cause the piano to change, and its own variation can lead to the generation of different timbre. The touch-key behavior needs to be accomplished by the player's vision, and the vision plays a key role in the actual piano performance[8].

The performance of any musical work is shown through different playing skills. on the face of it, the misconception that the playing skill is accomplished only depends on the pianist's own touch. This is the key reason why many learners practice piano learning is inefficient and ineffective. Therefore, in the actual piano playing learning, the music information obtained by the learners basically comes from the music score[9]. Therefore, in practical teaching, teachers should properly guide learners to strictly read the spectrum and teach learners to regard sound pattern symbols as continuous links, so that the complete visual information will promote the tactile organs to realize the consistency of playing skills.

It is the most difficult part to learn in the actual piano playing, which is the most difficult part in the piano playing teaching, and the piano playing integrates its own actual emotion, these emotions can not be seen and touched. In order to promote learners to better integrate their emotions into

piano playing, first of all, they must have the ability of music expression. The cooperative practice of three senses is the premise and foundation of the cultivation of piano performance expression ability. The piano spectrum obtained by the visual system contains many contents, such as music terminology and strength mark, speed change and tune rise and fall, and so on. In this process, it is necessary to clearly understand the emotional changes and different forms of music to be expressed in the work. Content, in the mind in the general formation of contours and images. In the actual piano playing, on the basis of the knowledge of music theory, the piano spectrum seen by vision is actually transformed into the corresponding melodic lines and sound colors, and this is used as a continuous guide to the tactile nervous system. With the help of the coordination of arms, wrists and fingertips, it shows the content and time of piano music, and shows the rich and colorful feelings in piano works through the varied timbre of piano spectrum[10].

## 5. Conclusion

For pianists, to learn the complete coordination ability of piano playing, and with the help of the actual expression art of piano art, this is a process of constantly improving themselves and the process of learners' continuous exercise. In this process, more efforts and exercises are needed. At this time, the correct guidance of the piano playing teacher can constantly correct the mistakes of the students and take a lot of detours, thus quickly moving to the right track, quickly mastering and gradually adapting to vision. With the synergy of hearing and touch, learners use their own bodies to familiarize themselves with the piano and direct them with their own brains to make themselves and the piano play miraculous.

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