INTRODUCTION

The voice may be regarded as the first musical instrument known to man because he was endowed with it, even before the invention of instruments. It is a universal instrument of music. It is the only musical instrument common to all musical systems in the world.

The human voice is a delicate, sympathetic and perfect musical instrument according to a musician. It is a highly complex mechanism involving muscles of respiration, phonation and articulation. Unless all these muscles act in perfect coordination with each other, there will be problems in sound production. The human voice does not have a definite range and the range can be extended with practice. The shape of the resonators can be modified by muscular movements which enable it to make hundreds of phonetic sounds. One of the unique features of the human voice is that the size and shape of the resonators are under the conscious control of the performer, enabling him/her to produce variety of tone colors. No other instrument can duplicate the intensity of feelings the voice puts forth. The extreme flexibility of the control of the frequency, the timbre and the output in the voice make the instrument express all emotions. According to Cicely Berry “It is obviously difficult to talk about voice in general terms, because the voice is absolutely personal to the individual. It is the means by which you communicate your inner self, and there are many factors both physical and psychological, which have contributed to its making”.

A high quality voice is necessary for every singer in order to produce good music. It is a known fact that a good voice bears a tremendous impact on the listeners. In the musical literature also wherever the merits of singers are expounded, the possession of a good voice is considered as one of the necessary qualities of good singing. Therefore, it is very important for singers to keep their voice sweet and melodious at all times. It should be able to do more than merely produce sounds. It must be capable of producing a wide range of controlled frequencies and be able to sustain them for the necessary length of time at various ornaments related to the particular style of music. The vocal mechanism is brought into complete obedience to follow the will of the mind through training.
This process of bringing the voice under control, looking into traditional and using modern scientific techniques is known as voice culture in the field of music. The methods of training of voice vary from one system to another. Voice culture in music is relatively a new term and has come up recently few decades ago. It is a branch of knowledge which deals with the techniques of right voice production.

Musical study and vocal study are two separate things. Where musical study involves the science of music, knowledge of ragas, compositions, training of gayaki and complex rhythmic patterns; vocal study deals with the right way of voice production, flexibility of muscles and total health of the vocal apparatus.

Although the classical system is enriched with many exercises and has stood tall to the test of time, a comprehensive study of the scientific methods and techniques used for voice cultivation is also highly necessary to enable the singer to identify correctly his/her own voice and to effortlessly manipulate his/her vocal apparatus at free will. In India, a scientific system of voice study is lacking. It is largely observed that students imitate the voice of their gurus which result in constrictor tensions in the throat and in few cases total voice loss. Musicians in India give importance to the knowledge part of music and follow the traditional way of practice. Awareness and knowledge of good voice training is lacking due to which many singers are affected on a later stage. In Natyashastra, Bharat mentions about gayak ke gunna, dosha, which was a scientific way in historical period. But it wasn't followed or taken up seriously later on. In the West, there is an elaborate way. The methods and techniques which are developed are after an extensive research and analysis. The singers in India are often clueless when it comes to building up of voice. Those who are gifted with melodious voices never felt the need to extensively work on them, but those who aren't so gifted, rely on their teachers or gurus to help them, who never had to face such problems. So, they use trial and error methods to improve voice, which does a lot of damage to the muscles and is time consuming too. In other cases, students resort to imitation of voice which can have even more serious consequences. So, there needs to be a perfect system of voice cultivation based on traditional and modern scientific techniques which will be a guiding source to millions of aspiring singers. The trained voice illustrates strength, force and flexibility. It is free from any external force, is open throated and sounds steady.
The study “Voice cultivation in Hindustani Classical and Western Music, a comparative research” is an effort to decipher modern scientific techniques that are beneficial to Hindustani vocal music and its application, with a scholarly approach. The study along with the voice culture techniques in Hindustani training system has taken into account voice culture techniques of the West and tried to deduce the correct way of voice production based on scientific truths.

The research thesis is divided into seven chapters, followed by conclusion.

The first chapter gives a concise history of Hindustani classical music in general. Starting from the Vedic age to modern period, the story of Hindustani classical music is told in a concise form. The history of Hindustani music is a very eventful one, with different cultures influencing its present form today.

Similarly, the second chapter discusses the history of Western music in a short form. As against Indian history which has records starting from the Vedic period i.e., much before Christ. Western music history starts from around 9-10 century AD through Gregorian chants in churches. It is mainly divided into Medieval period (500-1400 AD), Renaissance (1400-1600AD); the common practice period which includes the Baroque (1600-1750AD), Classical (1750-1830) and Romantic (1804-1910 AD); the 20th century (1901-2000) which includes the modern period and contemporary period.

The third chapter gives a detailed analysis of Voice training in Hindustani music. Indian music holds vocal music as the highest form of art. Starting from the Vedic era vocal training had begun. It was the means to attain spiritual upliftment. A detailed analysis and chapters on voice and training have been included in the great musical treatise of Indian music such as the ‘Natyashastra’, ‘Sangeet Ratnakara’, ‘Brihaddeshi’ and many more. The Voice training in the Guru-Shishya tradition also tells us about the formidable and time tested techniques of voice training and gives a fruitful insight.

The fourth chapter is dedicated to Voice training in Western music. Since there are separate voice types in the west, there are different voice techniques for improvement and flexibility. The voice training in the west mainly focuses on volume and resonance, since the Opera consists of high demanding vocal output and control. The techniques are a result of an intensive scientific research based on fundamental truths.
The fifth chapter mainly talks about Voice Cultivation. What exactly voice cultivation is about. The need and importance of voice cultivation is extensively dealt with. The areas of vocal apparatus which are involved including the respiratory, phonatory and resonatory chambers are discussed.

The sixth chapter is the science behind the principles and aspects of vocal improvement. Each and every area of voice- starting from the lungs, diaphragm, vocal cords, larygeopharynx and resonance chambers in the mouth are actively discussed with exercises for improvement. An in depth study shows how all these functional elements act in perfect harmony true to the natural laws of phonation.

The seventh or the final chapter, talks about external elements that are in vogue for improvement of voice. It includes Yoga and Pranayama techniques, The active role of Psychology in voice culture, Workshops and seminars on voice; that help in creating awareness, Modern contemporary techniques with some practical suggestions. Towards the end, Voice disorders and Remedies have been discussed, some suggestions for cure as well has been made in an attempt to benefit students of singing.

Finally, all the main points of the entire thesis have been conclusively summarized in the conclusion. The Researcher has given his own personal view, and tried to bring together important elements and principles from the thesis.

**Methodology**

For this in-depth study, both the primary and secondary resources were used. Thus, Articles, journals, books, chronicles, pictures, workshops, seminars, audio and video materials. The views of some famous musicians and relevant personalities through interview, email correspondence and workshops were collected and used. The researcher was fortunate enough to travel abroad and get a chance to interview western musicians and experts too.