Chapter – I

Introduction

Music plays an important role in the life of human being. Music has been associated not only with our life and also other areas such as Folk, Literature, Drama, Devotion, Classical, Melodies, Cinema and Funeral pyre etc. In the fast environment of the current society, fine arts and performing arts can contribute a variety of entertainment for the healthy environment. The modern age is leading very fast for a total scientific rebellion. Technology is an objective product. Everything is based on technology. Human is the most powerful technology in the earth. Human made all types of technology in music, travel, communication, household things, entertainment and others. In music, earlier days instruments, current digital instruments and everything has been made by human.

A combination of South Indian Music enthusiasts, teachers, and students, patrons of art, critics, media and technology has helped South Indian Music to survive through the ages. Today, a student learns from the coziness of his/her home with Globe Trotting Gurus, across continents by tuning in front of a lap top or mobile phone. Such is the penetration of modern technology into South Indian Music. Considering how South Indian Music has survived and evolved as societies transformed, it will continue to grow and survive further tests of time. The classical musicians of the present generation are well-educated. They are engineers, doctorate holders or have a regular job but also have a great passion for music.

Music is both an art (kala) and a science (sastra). The study and practice of this art and science develops and enhances the intellectual aspects of a particular soul. It’s a gift by god to human kind. Music education has provided humanity, grace and refinement while removing the coarseness in one’s life. The origin of Indian music
can be traced to the Vedic period. During the performances of the Asvamedha and Rajasuya Yagas, the priest and the performer of the Yaga, had to sing certain performance of the Yajna and had to play on the veenai. Dance was performed at the conclusion of the yajna.²

The South Indian Music as old as the ‘Veda’s. There are four Vedas which are known as Rig, Yajur, Sama and Atharvana Veda. Of these four Vedas, Sama Veda is said to have laid a very strong foundation for Indian music which includes Hindustani and South Indian Music.³ Apart from Vedas, various sources have declared the presence, essence and flavour of South Indian Music. For example, the Puranas, Upanishads, Brahmanas have proven that South Indian Music has been in existence. During the ancient period (vedic Period 4th century A.D), there was no specific term mentioned but there are sufficient resources that can be taken into consideration that Carnatic Music or South Indian Music existed during this period. Let us analyze the depth of these fine arts under the nature of South Indian Music.

1.1 Nature of South Indian Music

There is also an opinion that music was originated from various sounds of the nature and animals. The great scientist Darwin opined that music was originated from the nature by imitating the various sounds produced by the animals and birds. The ancient man must have inspired by the sounds of nature like waterfall, whistling wind etc to create music. ‘Music evolved from the imitation of the calls and cries of the animals and birds. In the Rikpratishakhya (the grammar of the Rigveda) and musical treatises of India, this theory finds support to some extent’.⁴

In India, Mythology has a very important place and its influence on the art and culture of the country is phenomenal. South Indian Music is said to be closely associated with Hinduism which is the dominant religion of India. The literary
sources such as the Epics and Mythological anthologies have also indicated that there 
is a close association between music and divinity many scholars and saints believe 
that music is the greatest form of Tapasya (penance) and the easiest way to reach 
godhead or attain Salvation. There are others who believe that music itself is divine 
and that perfect synchronization of the performer with musical sounds, nada is the real 
divine bliss5. This practice is called ‘Nadopasana’.

Among the four Vedas, Rig veda was first recited in a monotone known as 
Archika. From this monotone recitation the Gathika or two tone chant was derived. 
After some time the Gathika Gana was replaced with Samika which consists of three 
notes, where each notes is given a specific name such as Udatta, Anudatta and 
Svrita6. These svaras in musical terms are RI(Madhya stai Rishabham), Ni (Mandra 
stai Nishadham), and sa (Madhya stai Shadjam).Only based on these 3 svaras, the 
compositions were composed and sung and this was during the Rig veda period. 
During this periods mantras were tuned, by using these 3 particular Svaras as the 
development took place in the next vedic period, Yajur veda period, additional of two 
svaras were identified, they are Ga(Madhya stai Gandharam) and Dha (Mandra stai 
dhaivatham). Combining the three svaras from rig and yajur veda, Ga, Ri, Sa, Ni, Dha 
svaras were formed and these development grew to the next vedic period, sama veda.

In the sama veda, two additional svaras were introduced. The svaras were 
Ma(Madhya stai madhyamam), and Pa(mandra stai Panchamam). The combination of 
the svaras formed from rig to sama veda period, the svaras can be arranged in the 
form of Ma, Ga, Ri, Sa, Ni, Dha, Pa taking into consideration. The order of the svaras 
will be as such Sa, Ri, Ga, Ma, Pa, Dha, Ni. During the sama veda period as the basic 
7 svara (Saptha svara) were found through a special technique called Graha Bedham. 
Other svaras were found through this technique and the svarasthanas were derived.
These 12 svarasthanas, were then elaborated into 16 svarasthanas, where Rishabam, Gandharam, Dhaivatham and Nishadham has additional note value, based on the 16 svaras. It was Venkatamahi who formulated the 72 Melakaratha scheme.

1.2 History of South Indian Music

Music is said to have begun from the sounds of the Universe, the ‘Om’. However, Carnatic itself can be traced back to a time when there were no distinctions among the styles of music in India. Among the first music forms were the recitation of scriptures, including the Vedas (especially Sama Veda) which were originally performed with only three notes (ni, sa, ri) and later in 7 notes (400BC), in the raga Kharaharapriya. From 300-100BC, the Upanishads mention the notes and instruments, including the veena. The Ramayana and Mahabharata (around 40BC) also mention this music.

In the second century, Bharatha's Natyasastra described dance and music in great detail. He described ragas (jaatis), svaras, varnams, tala and other aspects of music. In parallel to this, there was a great tamil music tradition even before the period of Tholkappiam(3rd century A.D). In Silapadikkaram the author Elangoadigal describes the various musical forms, Tamil Panns, Palais, Mandilam (the octave), and the Kural thiribu (ie.) shifting of the ‘Sa’ to create new ragas.

In the fifth century, Karaikal Ammaiayar in Mootha Thirupadhikam mentions the names of seven svaras (Kural, Thuttam, Kaikilai, Uzhai, Ili, Vilari and Tharam) which are equivalent to sa, ri, ga, ma, pa, dha and ni, various musical instruments and music informations.
In the sixth century, the Brihaddesi first used the word ‘raga’ and mentioned some popular ones. Kudumianmalai inscriptions at Pudukottai in Tamilnadu describe the solfa syllables of music and musical informations in the seventh century. In Tamil tradition of music sixth to ninth centuries are the period of Thevaaram and DivyaPrabhandam which refers almost all the musical aspects and different types of Panns. In Thiruvasagam of Manikkavasagar, there are references available for music and musical forms.

In the 12th century Jayadeva's Gita Govinda inspired music and dance in his Ashtapadis, each in a different raga. Until the 13th century, classical music was similar or common across India. With the arrival of Moghul influences and Hindustani music the Carnatic music split into the two forms, the former incorporating the new influences and the latter retaining the original form. The Sangita Ratnakara described swaras, ragas, talas, instruments, and gamakas, and this work first used the word ‘Carnatic’, but it was not until the 1300s that Carnatic music and Hindustani were clearly distinguished. Sangeeta Sara(13th century) is the first to classify the ragas as Melas and Janyaragas.

In the 15th century Annagirinathar wrote his famous Tiruppugazh in Tamil. At this time Annamacharya first described the musical form known as the Kriti, which had a Pallavi, Anupallavi and Charanam. Purandaradasa also wrote the Varisais for musical exercise and Geetams which are still used to teach beginners. In the 16th century, Swaramela Kalanidhi described a further elaboration of Melakarthas, ragas and playing techniques of the Veena.

In the 17th century Venkatamakhi created his 72 Melakartha raga system, which used the Kapatayadi scheme. The Sangeeta Saramrita and Sangraha Choodamani were
written in the 18th century. Shri.R.K.Ravindranath in his book ‘Dakshinendian Sangitham’ has mentioned that it is named after Purandaradasa native of Karnataka desa who contributed a systematic format in the study of Carnatic music in the form of sarali varisas, janta varisas, sapta tala alankaras, geethams etc, which is being followed even today by the teachers of Carnatic Music.

18\textsuperscript{th} and 19\textsuperscript{th} centuries were very rich with great composers in the field of South Indian Music like Saint Tyagaraja, Muthuswamy Dikshitar, Syama Sastrigal, Swathi Thirunal Maharaja, Pattanam Subramanya Iyer, Gopalakrishna Bharathi etc. It was not until the 19\textsuperscript{th} century that systematic notations were developed, written in Sangeeta Sampradaya Pradarsini and Sangeeta Chandrika. Some were even written at this time in Western staff notation.

In the 20\textsuperscript{th} century, Carnatic music came into its modern form. It was then that Sabhas were formed concerts were performed for the public (and not just kings and nobles). Papanasam Sivan composed music in this century. Ariyakudi Ramanuja Iyengar also created a system of concert format which most musicians use today\textsuperscript{7}. But we can find that the 20\textsuperscript{th} century musicians popularized all the valuable compositions of the above personalities. All these composers and musicians had different individual styles.

In the 21\textsuperscript{st} century, Carnatic music continued to develop with schools, concerts and organizations around the world.
1.3 Elements of South Indian Music

1.3.1 Sruthi

Elements of Carnatic Music are basically on what substance the music is built on the main element that the emphasis is given is Sruthi. Sruthi was born from nada which means musical sounds. Musical sounds are produced by regular and periodic vibrations of sounding body. Swami Prajnananda gives us a beautiful explanation about Sruthi. He says “Sruthi is the microtone which has the minute perceptible (Shravanayogya) tones or musical sound unit that constitutes the structure of seven tones”. The seven tones here refer to the basic Sapta svaras which are Shadjam, Rishabam, Gandharam, Madhyamam, Panchamam, Dhaivatham and Nishadham. Other authors on Indian music (Shastrakanas) have defined Sruti as; “prathamah shravanat shabdah shruyate hasvamatrakah/ sa shruthih samparijneya svaravyava-lakshamanam //”

During the primitive, prehistoric and vedic periods, we do not directly come across the use of the sruthi. Nevertheless we cannot deny its existence during those periods.

Microtones or Sruthi came into existence during the beginning of the classical period in the 600-500 B.C. The strength of the vedic music Samagana was facing a fading off period as the Laukika Gandharva system of music which was said to be systematic and scientific and it was too gaining its fame and popularity. When we talk about Microtones or Sruthi hereafter based on South Indian Music, there are 22 types of Sruthis, each of these Sruthi has its specific names and its frequencies. Sruthi is also described as a pitch or quartetone. In general terms, Sruthi is a musical pitch that one uses as a base tone during the learning process, stage performance (Kutcheri)
and while teaching. Each individual have various types of pitch. It varies due to age, gender and the capacity at which an individual is able to perform. For instance, a male singer usually has his pitch from C-D# or also known as 1 – 2 ½ kattai, sometimes they also use E or 3 kattai – identification used on the harmonium. Female singers usually use pitches from F – A or also known as A – 6 kattai, sometimes they also use A# or 6 1/2 kattai. The scale or pitch does not really matter as long as the singer is comfortable using that particular scale to sing and there lies the capacity to stretch the Svaras from Mandra Sthai Panchamam to Tara Sthai Panchamam. This will ensure that the scale chosen by the singer for himself/ herself is suitable for them.

Sruthis are usually divided into 2 divisions which are Madhyama Sruthi (when Madhya Sthai Madhyamam is taken as the basic note from its original pitch) and Panchama Sruthi (when Madhya Sthai Shadjam is used as the basic note). Krithis are commonly sung at the Panchama sruthi as it is easy to have proper co-ordination with the orchestra members as well as the pitching of the instruments are concerned. No doubt the Madhyama Sruthi is also used but the frequency of usage is lesser than the Panchama Sruthi. Sruthi box and Tambura are the common instruments used to determine the pitch these days.

1.3.2 Svara system

Svaras are the musical sounds backed by full resonance and has the capacity to have its own shine that pleases the hearts of the listeners. There are seven basic svaras with variety of combinations that forms twelve and even up to sixteen svaras. All svaras were said to have varieties regardless of their position of existence in the scale of notes. This statement also includes the positions of shadjam and panchamam. The twelve svarastanas that was found in south Indian Music scale scheme are shadjam
(Sa), Suddha Rishabam (R1), Chatusruthi Rishabam (R2), Sadharana Gandharam (G2), Antara Gandharam (G3), Suddha Madhyamam (M1), Prathi Madhyamam (M2), Panchamam (Pa), Suddha Dhaivatham (D1), Chatusruthi Dhaivatham (D2), Kaisiki Nishadham (N2), Kaakali Nishadham (N3). Apart from these 12 svaras, there are four additional svaras that are also used frequently in South Indian Music. The additional four svaras are Shatsruthi Rishabam (R3), Suddha Gandharam (G1), Shatsruthi Dhaivatham (D3) and Suddha Nishadham (N1). These svaras have no individual svarasthanams. They are dependent on the other svaras for support in practical terms.

1.3.3 Raga system

Raga is the pivotal concept of south Indian Music through the raga concept, the ideal wholesome music is attained. Raga is the important element of systematic music which can be perceived and distinguished by human ear. It has the capacity and capabilities of creating soothing melody which is also known as Raga Alapana or rendition of raga. In total, there are 72 Melakartha ragas (also known as janaka ragas). These 72 ragas are known as Mother Raga which has 7 svaras in its Arohanam and Avarohanam. All these 7 svaras should or must be presented to fulfill the criteria of a Melakartha Raga. The idea and formula of the 72 Melakartha scheme was invented by Venkatamahdi based on the permutation and combination of the 12 svarasthanas and the 16 svarasthanas. These 72 Melakartha ragas are also known as Sampoorna mela. These ragas are divided into two parts equally into Suddha madhyama and Prathi madhyama ragas.

These Melakartha ragas are grouped into 12 chakras based on the kapatayadi formula. The 12 chakras are Indu, Netra, Agni, Veda, Bana, Rudu, Rishi, Vasu,
Brahma, Disi, Rudra and Aditya. In each chakra, 6 melas are grouped into it. Each of these mela ragas has its own Janya raga that comes under them. These ragas have own characteristics, for the Melakartha ragas as well as for its Janya ragas. These characteristics are known as Raga Lakhanas. Raga has its specific effects towards the compositions as well as towards mankind. Raga also plays an important role as a guide to determine which scale at particular krithi or composition belongs, whether major or minor scale. This makes South Indian Music very special as the ragas are identified very differently compared to western music.

In western music, the presence of a foreign note will make a wide difference in the entire scale. But in South Indian Music, for example Anantha Bhairavi raga, the Antara Gandharam is a foreign note that does not belong to the scale of that raga. But during Prayogas, the presence of the Antara Gandharam note gives a special effect to this raga. Ragas apart from being classified as Melakartha and Janyaraga, it can be further divided into several categories which is Varja ragas, Vakra ragas, Upanga ragas and Bhashanga ragas. Apart from these varieties of raga there are classified ragas such as Sampoorna raga, Shadava raga, Audava raga and Svaranathara raga. Based on these variations Janya ragas are formed based on permutations and combinations.

There are some examples of Vakra ragas that are formed from the combinations of Janaka ragas. In this context, vakram refers to the arrangements of the svaras in the Arohanam and Avarohanam which are not in its correct order. But this does not mean that the arrangements are false. The arrangements are such and this adds on to the beauty of the raga. Apart from Vakra raga, there are combinations of Varja raga. Varja raga are ragas that has either one, two or three absent notes from its Arohanam or Avarohanam.
1.3.4 Tala system

In South Indian Music, the tala system is the most complicated and difficult branch. It is the measuring rod of musical time. As now a human being cannot possibly live without heart beat, music cannot live and sustain without rhythm which is governed by Talas. Portions like raga Alapanas are immeasurable. For example in Adhi tala, there are 8 akshara, Rupakam has 6 aksharas. In general, there are 7 main talas also known as Sapta Talas. These talas are Dhruva, Matya, Jhamba, Ata, Rupaka, Tripura and Eka. These talas are combined with the 5 basic Jathis through permutation with sapta talas and by this way the 35 talas scheme were formed.

The 5 basic jathis are Tisra jathi, Chatusra jathi, Misra jathi, Kanda jathi and Sankeerna jathi. In brief, the 35 talas result by the change of the Laghu jathi in the sapta tala. The 35 talas then combined with 5 Gathi bedhas forms 175 talas. These 5 gathis are Tisra gathi, Chatusra gathi, Kanda gathi, Misra gathi and Sangkeerna gathi.

1.3.5. Creativity of South Indian Music

There are several elements used in Carnatic music to add on to beautify the art. Issues such as raga, tala, svarasthanas are very general compared to the depth of the art. Ragas that are formed are sung elaborately and they are known as Raga Alapana. Apart from raga alapana particular phrases of a krithi is taken in specific and niravals are sung. Niravals are repetition of sahithya in modulation of svaras ranging from lower range to higher range within its Arohana and Avarohana. Let us look further into these areas that enhanced the Carnatic music.
1.3.6 Raga Alapana

Raga Alapana is usually performed before a song is sung in the same raga as the song. Rendering the raga is left upon the singer or instrumentalist’s creativity binding themselves to the Arohanam and Avarohanam of the piece. Musicians express their talents in this area, by performing the raga alapana for approximately 1 hour, emphasizing on the important svaras, the ascending and descending of the Svaras. Musicians can also show Grahabedhas during the raga alapana[^9]. This gives the audience a variety of raga in one main raga alapana. By this, musicians whether the singer or instrumentalist are able to portray their talents and capacity of handling such techniques which not many venture into.

1.3.7 Niraval

Apart from raga alapana, Niraval is also an additional flavour that is usually added on to a Krithi. Niraval is the repetition of Sahithya, of either the anupallavi or verses of the charanam which portrays a particular meaning. These phrases are sung in Vilamba kaala, Madhyama kaala, and Thurita kaala. Improvisation can be shown by singing the Niraval in all the 3 kaalas. The Niraval can be sung either after completion of the song or while the piece is being sung. For example, in krithi ‘Pirava varam tharum’ by papanasam sivan in Lathangi raga, the charanam is taken in particular to sing the Niraval. The stanza ‘parvathi neya baktha sahaya ’, can be sung as a separate portion after completion of the krithi or it can be sung while the charanam is been sung before moving on the next stanza.
1.3.8 Kalpanasvaram

The next beauty of Carnatic music is Kalpanasvaram. Kalpana svarams are rendition of Svaras that are self composed by the musicians based on their creativity, following the Arohana and Avarohana of the raga\(^{20}\). These svaras are mostly sung or played spontaneously during performances. Nevertheless, some do prepare in advance as to the flow of svaras. This situation mostly occurs in the early stages of the performer’s process of learning. These svaras can be sung for as many avarthanams as the singer/instrumentalist wishes to render. As the end of krithi 6\(^{th}\) or 7\(^{th}\) avarthanams, a Svara Korvai is set to indicate that the Kalpanasvara is heading towards the end.

1.3.9 Thanam

Thanam is the next stage performed in the Ragam, Thanam, Pallavi sequence. Thanam is more or less a medium tempo version of singing a raga which has a specific rhythmic pattern. The thanam contains syllables called Anantham, which then became thanam eventually. These portions are trained with the aid of Thana varnams. Instead of singing the varnams with the provided sahithyas, it is replaced with syllables ‘Anantham’. Thanam was first introduced for Veena. Thanam is usually sung or played on the instrument without any accompaniment of percussions \(^{21}\). This segment is basically the creativity of the artist in the manner in which it is rendered. It has the similar pattern as in how the ragas are rendered. If the raga is sung in Revathi, then the thanam will also be rendered in Revathi.

1.3.10 Ragam Thanam Pallavi

Pallavi is the main assess of Ragam Thanam Pallavi concept. Basically, Pallavi is the first few stanza of a krithi. These lines in this concept are sung with variation where the pallavi is sung in a form of niraval on a vilamba kaala, mathima
kaala and combination of both vice versa. While handling the pallavi rendition, singers or instrumentalist do set the pallavi rendition, singers or instrumentalist do set the pallavi at tisra nadai for krithi in adhi thala, including kalpana svaras set in vilamba kaala, mathyama kaala and mora ²².

Some artist, tutors do take the liberty to compose the pallavi with variety of ragas. For example, the main pallavi is set and fixed in Kalyani. The variation of raga is shown in the formation of kalpanasvaram. This adds on colour and flavour to the entire construction of the pallavi. Apart from the kalpana svarams and niravals, the setting of the kuraippu and svara korvais or even mora are done towards the end. This portion is considered the tedious part as it requires an individual may it be an artist, teacher or disciple, the strength of one’s tala is very important to compose this portion.

This area of South Indian Music mainly focuses on the creativity, tala consistency and capabilities on how to coordinate with the accompanying artist during the Thani Avarthanam segment. The presentation of this Ragam Thanam Pallavi may look simple to audience but yet it is very complex in nature. This area actually portrays the creativity of the performer while rendering as some artist do have the capacity and capabilities to render this, without any preparation in advance. The rendering of Ragam Thanam Pallavi is indeed a great art. There can be no two opinions about it. A pallavi should be rendered without making it a painful experience either to the sideman or to the listeners. That is how the successful musicians, Ramanuja Iyengar, Musiri Subramania Iyer, Viswanatha Iyer, Madurai Mani Iyer, had rendered it in the part. Ramanuja Iyengar had sung pallavis in 4-Kalai chaukam. Mani
lyer would sing simple pallavi’s devoid of complications, employing only sarvalaghu phrases. 

1.4 Need for the study

Although many researches are currently working on in the field of Musical Technology, no significant work has been done on the impact of technology on South Indian Music. Today South Indian Music has become popular all over the world. Even NRI people are showing interest in hearing and learning South Indian Music. Thanks to the growth of science and technology and globalization, South Indian Music is witnessing a lot of changes. Many new methods have been introduced in music concert, music recording and music education. Hence the present study focuses on the impact of information technology on South Indian Music and Music education.
1.5 Review of literature

1. Archana Nathan reported in the Hindu that online music classes are a huge draw among the young brigade of learners. Though, this sound like a scene from a regular carnatic music class, what distinguishes this teacher-student duo is that they are sitting miles apart from each other. Pandit Parameshwar Hegde, Hindustani vocalist said, that the need for such classes arose mainly because there was a growing demand for such a model from Indians settled outside the country. Generally, most of abroad students are learning through online classes. They would have begun learning here, but then they would have moved out of the country for various reasons. They do not want to stop learning music. So, the online model works well in such cases.

2. In Recognition of his two decades long musical legacy, the prestigious Berklee College of Music is all set to honour Oscar winning composer A.R.Rahman with an honorary doctorate. Berklee College of Music president Roger H Brown said, “A friend from India described A.R.Rahman to me as John Williams and Sting rolled into one a leading film composer and a wildly popular, brilliant songwriter and performer. We welcome him to Berklee where the college and our students look forward to paying our respects.”

3. Sudharaja delivered the origin of Carnatic music through ‘Melody in Nature’, the Hindu. This is about the story of Rasa as she discovers the wonders of music can be yours too. With diagram also this system is very useful for child or young Carnatic learners through net, papers, with diagram and story: its innovative system of south Indian music.
4. Four city-based music lovers have developed an ‘App’ that let the listeners at clubs vote for the songs they want to listen to Someone, somewhere, once it is said, ‘Music is the place where democracy lives’. Four brothers from the city have taken that quite seriously. Passionate about partying and music, they are introducing a new app that promotes musical democracy and creates a better experience for revelers. “Clubs usually play the music they want. Instead, we wondered, why not let people decide what they want to listen to in real time,” says technologist Ganesh Jayaprakash who has developed the application called Muze that allows people to vote for the songs they like. How to monetize the APP, they roped it in digital marketers Surej Salim and Manish Kishore who have the marketing background to take the new application to the people.

5. Well known international percussionist and entrepreneur, Dr. Rohan Krishnamurthy will offer the sixth South Indian Percussion Institutes at the Eastman School of Music at the University of Rochester in New York. The week-long summer institutes are part of Eastman’s famous Summer@Eastman series. Students can explore essential techniques and approaches of the Camatic percussion tradition and gain hands-on experience playing several instruments such as the pitched Mridangam, Ganjira, Ghatam and Konakkol, the vocal percussion. Students will be provided with Eastman’s complete set of Camatic percussion instruments that Rohan obtained while pursuing his Ph.D. and teaching an Indian Percussion Ensemble at the University.

6. Ians reported in The Hindu that Music in Mobile Applications, courtesy a new mobile app targeted at popularising Indian classical music among
youngsters. Santoor maestro Pandit Tarun Bhattacharya’s new album comprising bhajans and other tunes will be launched this month—end in the form of a mobile app and Quick Response code (QR code) which enable shopping via Smart phones. Moreover the QR codes can be used directly to get the particular tune on one’s handsets at a specific price told IANS. The mobile apps, developed by BrandNext are christened ‘Divine Bliss’ while the QR codes are called ‘Celestial Santoor’.

7. Carnatic Vocalist Vijayalakshmy Subramaniam talks about disseminating music among the Masses in her journey as a performer, teacher and researcher. She says “A lot of change has come over. We get to listen to new compositions, new ragas and styles. I also find that most of the classical musicians of the present generation are well-educated. They are engineers, doctorate holders or have a regular job but also have a great passion for music. Whereas most of the musical greats of the past weren’t like that. However, compared to the older generation, the present lot is up against many challenges. With lots of options available, it isn’t necessary that you get an audience for your concerts. Since they are tied up with so many things, music lovers prefer listening to a musician on the television and the computer. But earlier, when you want to listen to a Semmangudi or any other musician, you had to be at the venue”.

8. Athira.M reported in The Hindu that the Carnatic concerts grow with wide media, tune in to Carnatic vocalist Gayathri Venkataraghavan talking about the Carnatic music that singers should make best use of the opportunities available.“There was a time when concerts were very few. But today the situation is different especially with wide media coverage which brings in
fame and name to the singers quite easily. I am quite amazed by the kind of
talent we have around. Only thing is that they have to practice hard and be
patient. Most of all, they have to have a spiritual connectivity,” she says.

of Music’. A maestro of Symphonies once said that music is not made, it
happens. That explains how the Indian musical scene came to be, its
evolution from the bulwark of Carnatic kritis to the now dominating Indian
film music that the average Indian swears by. It led Divakar Subramaniam, a
city-based musician/musical analyst who enjoys traditional music and
modern-day melodies to set up SIFM (School of Indian Film Music) in T.
Nagar. They believe that the external demands of the listener now outweigh
the internal demands of the director which is why the young artist has be in
tune with the times. The Tamil film industry has seen a periodic change in
sound, from M.S. Viswanathan to Ilaiyaaraja to A.R. Rahman. According to
Divakar, everyone can create music; some know it and some do not know.

10. Anjanarajan delivered in The Hindu that the Violin Sisters on their approach
to music. What really makes it complicated is that successful duos speak in
one voice — metaphorically. The violin duo of M. Lalitha and M. Nandini
certainly does, so much so that their Emails and SMS messages are signed
collectively and both identify themselves to strangers on the phone as
‘Lalitha Nandini’, the ‘Violin Sisters’. They are renowned as the only female
duo in Asia to perform World music, South Indian classical, fusion and
Western classical music. They say “Since both of us were based abroad, we
were selected as cultural ambassadors with Fulbright and Charles Wallace
Trust Fellowships; we were in the U.S. and the U.K. respectively. Given that
situation we had to adapt to a newer role sometimes, and became soloists too. We have also been performing Jugalbandis that involve one of us along with a North Indian artiste. Every system has its own beauty though we have studied a number of musical genres of the world. We see to it when we play Camatic we do not mix the other styles. Though we have tried to adapt the strong bowing technique of Western classical to Camatic music to enrich the music. The usage of fourth finger which is primarily used in Western classical has also adopted by us”.

11. Apoorva sripathi delivered in The Hindu that fusion concert, The Elements offered Carnatic music with a generous serving of Western elements. A Fusion music concert held by LK Charitable Trust saw The Elements performing in front of a packed house in Vani Mahal. The group consisted of Haricharan Seshadri on vocals, B.S. Purushotham on the kanjira, S. Muralikrishnan on percussions, Navneeth Sundar on the keyboard and Naveen Kumar on bass. They were later joined by Mandolin U. Rajesh. The concert, keeping true to Carnatic sensibilities, started off with a prayer (Gnana Vinayakane in Gambeera Nattai) to Lord Ganesha. Haricharan’s voice stood out through the evening. After the first song, Muralikrishnan introduced Rajesh to a delighted audience and the group went on to perform a medley from his album ‘Into the Light’. It was ably supported by the others. The bass guitarist Naveen was not quite audible, perhaps due to the many instruments that drowned him. Several other compositions followed, including one called ‘Fireflies’, which was fast-paced with Middle Eastern influences. Haricharan and Rajesh continued to evoke merriment in the audience who clicked photographs and kept talam to the keerthanais.
12. The Hindu magazine announced the new archives for music Rasikas and
Listeners. Here is an opportunity for you to interact with your favourite
artists through a new column called ‘ASK THE ARTIST’. All you have to
do is send in your questions with full name and address and select ones will
be answered by the artist. The column opens with Carnatic music exponent
S. Sowmya. Questions should reach them by May 19. The email address is:
fr.asktheartist@gmail.com.

13. Srinivasa ramanujam expressed in The Hindu who meet young musicians who
are giving a contemporary twist to vintage compositions, including poems of
Bharathi. This Tamil New Year’s Day was quite special to the members of
the band, Karthick Iyer Live. They launched a contemporary Carnatic
adaptation of Bharathi’s popular Aasai Mugam Marandhu Poche on
SoundCloud, an online distribution platform and clocked about 3000
‘listens’ in the first couple of days itself. “There have been several versions
of this song by many popular singers and we wanted ours to be unique,” says
singer-violinist Karthick Iyer who has released many such numbers online.
He says “Our music is not just about adding Western elements to a Carnatic
track — the tune has to fuse. It aims to give youngsters a good canvas to
listen to an old track that is already hugely popular among the classically
inclined.” He delivered that the Twenty-two-year-old Jananith does not just
restrict these musical ‘experiments’ to CDs and the online world — she
recently took a band of musicians, including guitarists and percussionists, to
perform a ‘Carnatic fusion’ kucheri for a private gathering. Buoyed by the
response, she intends to explore the works of other classic composers too.
14. Arvindh Krishnaswamy delivered about that the Application of Pitch Tracking to South Indian Classical Music. We present results of applying pitch trackers to samples of South Indian classical (Carnatic) music. In particular we can investigate the various musical notes used and their intonation. We try different pitch tracking methods and observe their performance in Carnatic music analysis. Examining our data, we find only 12 distinct intervals per octave among the notes that are played with constant pitch. However, there are pitch inflexions used sometimes that are not mere ornamentations - they are essential to the correct rendition of certain notes. Though these inflexions can be viewed as different versions of a particular note, they are certainly not equivalent to constant-pitch intervals like Just Intonation intervals, semitones or quartertones.

15. Sayontan Sinha explain that suffusion theme of ‘Frequently Asked Question’ and support for carnatic learners and rasikas and reported in the website for Listening and Learning’s of various carnatic music songs through by find song lyrics of carnaticstudent.org (e.g. “Balamurali krishna lyrics carnatica.net”) courtesy list found on Mohan Ayyar’s amazing carnaticcorner website. There you find additional links under the heading “Lyrics Sites sorted by Composer” For up-to-date information from several leading periodicals and other websites. In order to see and use Google Custom Search, JavaScript needs to be enabled in your internet browser. If you don’t see any Search field, check your browser settings. Websites included in the above Google custom search

http://www.carnatica.net

http://www.carnaticcorner.com
http://sahityam.net

http://www.sistla.org

http://www.sangeetasudha.org

http://www.swarasindhu.in

http://www.shivkumar.org

http://www.karnatik.com

http://music.karthiksanker.com

16. World popular website Google announced on paid tribute to the doyen of Carnatic music ‘M.S.Subbulakshmi’ by dedicating a colourful doodle on her 97th birthday.

17. The website of carnaticstudent.org launched that E-Learning of Carnatic Music year 2012. Ludwig has introduced the South Indian Music and arts in a very interesting and motivating way. With his great experience and knowledge he has created excellent material for a special internet course. It is a perfect way to learn about Carnatic music without being in India. Multimedia applications are revolutionizing the way music education could be delivered, down to practical lessons. The combination of newspaper and other articles, actual concerts etc. I feel one learns a lot when one is faced with performing, talking, teaching in foreign countries. Participation in the present course Music of South India, The good thing about this course is that at least we have all these amazing audio and video materials to help us understand better.
18. Indu Nandakumar says, “Carnatic music Mobile Application on Android and
its developed by Sivakumar Loganathan, a graduate student in Entertainment
Technology at the Carnegie Mellon University is gaining popularity in the
Android app market. This is because there is no single, simple interface
available to search Ragas”. The Carnatic Raga app is being downloaded
from all over the world, India with 48.5% followed by United States with
30% downloads. "Last month (December) saw 100% increase over the
average monthly downloads for this application. Since the launch in April
2011, the app has been downloaded 3090 times”, Sivakumar said.

19. Sruthi Radakrishnan and Sangeeta Kandhavel, ET Bureau delivered about the
Carnatic musician teaching foreign students on Facebook, YouTube & other
social media. Takaaki Kuno has an unusual dream for someone who is
Japanese: He wants to perform at The Music Academy in Chennai. To fulfill
the dream, he and his guru are taking an unconventional route-the use of a
video chat service for online learning, breaking the barriers of distance for a
centuries-old art form known for its strict adherence to tradition. Kuno
specialises in the percussion instrument the Ghatam, a form of earthenware
pot unique to South Indian classical music.

20. M.Subramanian analyzed same svara sequences in different rāga-s in the
current Karṇāṭaka music system, the raga’s are organized within the
framework of jānaka mēla-s in terms of the Arōhaṇa and Avarōhaṇa.
Typical examples will be presented using PRAAT, a pitch analysis software
tool tested and trusted in the academia. The graphic displays clearly depict
the pitch positioning of the individual svara-s. Contributing factors such as
the strength of the svara and the Gamaka may provide additional information. Additionally, it can also be shown using the Gayaka program of the Rasika software how the same sequence of svara-s actually differ in their construction and nuances. This software which allows you to generate precise gamaka-s in tones of vīṇā and flute, by entering the svara-s along with their durations and transitions. The pitch movements of the svara-s can be reconfirmed by this software.

21. Amanda J. Weidman revealed in his view that the elite, mostly urban South Indian Brahmin population supported an alternative economy of musical performance in which new sound technologies and performance venues contributed to the emergence of new techniques, aesthetics and instrumentation. Through careful textual and musical analysis, Weidman shows how, within the framework of the colonial encounter, musical practices and discourses are mediated between the ‘projects of modernity’ in colonial India on the one hand and the desire for preservation of ‘authentic’ Indian tradition on the other. The ideal Carnatic music had to exemplify ‘the modern’ by using new sound technologies, developing a written repertoire and staging concerts—while at the same time it embodied the ‘essential difference’ of Indian music. He also stated that the vocal nature of Indian music and its ties to oral tradition—came to stand for this essential difference.

22. Siddharth Bhaskar described Learning Music - long distance at New England school of Carnatic music. He learn Carnatic music and that too an instrument, Veena over the phone. Much can be communicated through the phone and of course music too in an aural medium. The world has
drastically shrunk due to modern communication technology and it is fitting that both teachers and students are willing to use and it should take fullest advantage of it. It seems that this advantage is maximized provided that the student has mastered fundamentals and visits the teacher upon occasion. The Cleveland Thyagaraja Aradhana Committee, an established and traditional organization, is creating an ensemble of North American musicians for their upcoming celebration in April 2007 who will be trained by well known senior artistes from India using video conferences. It seems, therefore, that the greatest utility of long-distance learning is in preserving the population of students of Carnatic music.

23. Hemamalini & Bindu D Menon, reported in The Economic Times that Chennai music festival is gaining a different meaning as NRIs, Apart from the simple joys of good music, for some NRIs, this festival has almost become synonymous with all things Indian. “Almost every child of an NRI is learning classical music or dance in the US. Unlike in India, this has broken the language and caste barrier,” he adds. This heightened interest in Carnatic music could also be explained by the success of the Tyagaraja Aradhana celebrated in Cleveland and in most major cities in the US every year or organizations like CAMAGA (Carnatic Music Association of Greater Atlanta) and others arranging for regular music kutcheries (concerts)”.

24. The Economic times delivered the news of All India Radio which has decided to launch two 24-hour music channels exclusively for Carnatic and Hindustani Classical music from July, its Director General Brijeshwar Singh said it on Wednesday. The services of the new channels would be
available on the DTH platform, he said here. The channel dedicated for Camatic Classical music would starts from Bangalore to Lucknow. Bangalore AIR will soon come up with ‘News on Phone’ service and listeners can dial 1258 and 1259 on BSNL mobile to get the latest news, he said adding similar services were being provided by Chennai, Kolkata, Hyderabad, Delhi, Mumbai and Patna AIR stations. AIR has plans to digitize its radio transmission during the eleventh plan period. AIR Deputy Director General (South) Dr H R Krishnamurthy was present on the occasion.

25. Lisa Tsering explained that the Global lounge music gets a taste of Carnatic soul, Vocalist Susheela Raman has now set her sights on America, with a new album, Love Trap (Narada) and a series of East Coast concert appearances. Love Trap which shot to the No. 2 spot on CMJ’s world music charts last week is probably the only pop album ever to feature tracks from two members of the ‘Trinity of Carnatic Music’, Tyagaraja and Dikshitar. A few of the songs are in English, including the title track but most of the material is influenced by Indian sounds and is sung in Sanskrit and Telugu. Sakhi Maro is based on a Meerabai bhajan in Marathi and the spontaneous and energetic Manusoloni adapted from Tyagaraja composition, blends Afrobeat with drum 'n' bass. Two compositions by Dikshitar, ‘Dharmavati’ and ‘Bliss’, use flamenco Piano technique. "I think people just need to get exposed to the music," she said. "People are really ready for it. With all the concerts we've done so far in England, we've gotten phenomenal response and really warmth from the public" I’d like to appeal to young musicians, especially in the Indian Diaspora," she told India-West.
26. Clara Ponty reported in The Economic Times that music senses to move east and west. Classical music engages the higher senses it is immensely satisfying at an intellectual plane. She is impressed by the great rhythmic complexity of Indian, especially Carnatic, music. Recently, she has performed with an American Bansuri player and met Tabla player Zakir Hussain and violinists L.Subramaniam and L.Shankar but confesses disarmingly that she has miles to go before she fathoms the richness of Indian classical traditions.

1.6 Objectives

- To find out the impact of technological devices in the development of south Indian music.

- To study the modern techniques in recording

- To study the technological developments in concerts

- To study the technological developments in Music Education

- To examine the views of performing artists on the technological developments in South Indian Music and Music Education.
1.7 Methodology

- This study adopts a historical and documentary method for utilizing available literature on technological devices, modern techniques and their development in South Indian Music and Music Education.

- Further, interview method was adopted in this study to collect data. To elicit the required information on the impact of technological devices in the development of South Indian Music and the technological developments in concerts, the views of performing artists were obtained through an interview schedule.

- The performing artists were chosen in all the major fields of South Indian Music.

- The respondents were identified based on their level of use of modern technological devices in their concerts.

- Their views were duly recorded and were analyzed by the researcher in a separate chapter.

1.8 Sources

- The interviews from the performing artists form the primary source of the study.

- Websites, Books, Articles, Dissertations, Reports, News clippings relating to South Indian Music and Music Education and Modern technological developments form the secondary source for this study.
1.9 Delimitation

- This research is concerned only with the study of technological developments in South Indian Music and Music education since 2000 to till date, as this period is considered as the beginning and growth of modern technology.

- The thesis has exclusively dealt with South Indian Music.

- Most of modern technological devices are used in the South Indian Music and Music education are developed and received good patronage among the music fraternity during this period.

1.10 Merits of technological usages of South Indian Music

- Retrieving, reproducing and archiving of old recordings and music manuscripts.

- Disseminating technically high quality music on a mass scale through low cost media.

- Producing audio visual aids for effective teaching, presentation and performance.

- Articulating, disseminating ideas and debates on music across a wide base through internet.

- Enhancing artists ability to reach larger global markets and reach them faster

- Preventing piracy.

- Create alternate channels to sell music.

- Enable better royalty payouts for artists.

Thus technology has the potential of enabling better quality and access, a better deal for performers, learners, listeners and a better functioning music industry. The crucial point is to harness technology in a practical, effective and meaningful way.
1.11 Plan of study

The thesis is divided into five chapters

Chapter I: Introduction

Chapter II: Technological usages in the development of South Indian Music

Chapter III: Technological usages in the development of Music Education

Chapter IV: Experiences and views of the performing artists of South Indian Music

Chapter V: Conclusion.

Works Cited

Appendix – I Articles
End Note of Introduction:


2. A Dictionary of South Indian Music And Musicians, Vol. III (L-N), Prof. P. Sambamoorthy, Page No. 9

3. Ibid – 1


7. Sources: “History of South Indian Music” and http:// Carnatica.net/origin.htm


10. Ibid 8 – Page No 16.


18. Padma Bushan Prof. P. Sambamurthy, B.A, B.L.


23. Ibid 21
Reviews Bibliography


Chapter II - Technological Usages in the Development of South Indian Music

2.1 Technological Devices

2.1.1 Microphones

2.1.2 Equalizer

2.1.3 Amplifier

2.1.4 Loudspeakers

2.1.5 PC Computers

2.1.6 LCD display with CPU

2.1.7 Net connections

2.1.8 Projector

2.1.9 Headphones

2.1.10 Laptop

2.1.11 New Activities with Laptops

2.1.12 Touch Screen

2.1.13 Interactive Whiteboard

2.2 Software

2.2.1 MIDI Files
2.2.2 Web Tool
2.2.3 Platforms
2.2.4 Best APPs for Classical Musicians

2.3 Development in Recording

2.3.1 Studio Recording

2.3.2 Equipment Found in a Recording Studio Commonly Includes

2.4 Current Recording Techniques

2.4.1 Live Recording

2.4.1.1 Minidisc Recorder

2.4.1.2 Flash-Memory Recorder

2.4.1.3 Laptop Computer with a Sound Card and Sound Editing Software

2.5 Multi-Track Recording

2.5.1 Multi-Track Software Using Computer

2.5.2 Swar Studio

2.5.3 Swar Studio in a Glance

2.5.4 Built-in Virtual Instruments

2.5.5 War-Trax

2.5.6 Platforms

2.6 Audio Restoration
2.7 Digital Recording

2.8 Digital Editing

2.9 Technological Developments in Music Concerts

2.9.1 Acoustics for Music Program

2.9.2 Acoustically Treated Hall

2.9.3 Audio Systems and Their Application

2.9.4 Sabhas and Concert Growth

2.9.5 Instruments

2.9.5.1 Sruti Generation

2.9.5.2 Tambura

2.9.5.3 Tambura Program (executable file Tamb6.exe).

2.9.5.4 Keyboard

2.10 Global Level

2.11 Fusion

2.12 Webcast

2.13 Jingles

Summary of Technology Usages