### <Introduction>

In these days about a lot of musician are interested on new Styles of music. This desire brought about the questions for growing the new techniques and different techniques to the composer and players. When you jazz recording or contemporary music, you can find a lot of non-classical sound moment in the phrases. Even though it's difficult to follow to sing the note. For examples, glissando notes, upward pitch and pitch bends sound, Harmonics sound, howling sound, buzz sound, multiphonic sound, Whistle, humming and playing, quarter tones and so on. Sometimes you cannot recognize with written note how will project the sound.

Most of techniques are working with open Hole-flute. Of course the new Technique requires a lot of practice and trying. And also new sound Development is big challenge for any musicians. Sometime you can read the score for the sound indications, but when you have to make Improvisation you should make decisions at the moment. So you have to imagine the sound effect before you play. Also you can have imagination of articulation effect and different techniques at right time but you have to control it with your flute very well.

In my research I would like to figure out different techniques and Articulations. I never had a detailed observation for that kind of Skills since I stared to play jazz music. I wanted to arrange this by myself. Because I can hear the different sound effects when I am Playing. But I couldn't reproduce these ideas again. So that is my research starting point. I could expect that after this research I will have more freedom with my instrument. And be able to use various techniques and sound tools in a flexible way. I want to shake up my way of thinking and escape from my own personal rules as an improviser. I would like to make more effort in my creativity and extend tools for improvising.

First of all, I will start my research by making little definitions about articulations and techniques, followed by researching on the history of jazz flute and list down the ideas these jazz flutist used. Secondly, I will research about different techniques and articulation effect from contemporary books and recordings.

The final step of my research will be to look for skills that jazz improvisers used in the solo, transcribe the music and indicate these skills with symbols. I will writ about what I feel in the process researching and planning for next steps.

## < A definition of Different Techniques and Articulations Effect>

Nowadays all the flutists are interesting about new performances techniques effect and different sound not even composers after Boehm systems. Many performers and composers currently have own individual techniques and fingering chart for new sound. It given affect to the jazz flute playing that is from contemporary music and avant-garde music. It was growing sound system by players. And they start to demonstrate and get ideas of new sound from world music and ethnic music. In recent years there has been a growing mutual influence and cross-pollination between jazz and many different forms of ethnic music. Robert Dick invented 'Glissando Head Joint'. Sometimes when we play glissando note or bending note, it could happen change the time or embouchure. If I want to make the sound we have to move head joint or chin.

Robert Dick invented 'Glissando Head Joint'. He is one of the big American flutists. If you use this head joint you can simulate electric guitar effect. It's like a Jimi Hendrix guitar sound. I thought that this is present situations form when we start to have an investigation of desired sound effect.



One of the American flutist - William Montgomery mentioned about Special effects (September, 1978)

"Because of the emphasis on creativity and the chance to explore new sounds in improvising, special effects can be useful in all improvisational styles. Some of the more common effects are:flutter tonguing, trills and tremolos, harmonics and regular fingerings multiphonics, whistle tones, glissandi and bending pitches(produced either by rolling the flute or sliding the fingers on an open-hole flute),key slaps, and vocal sounds(singing and playing simultaneous ly, for example)."<sup>2</sup>

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www.glissando.biz

<sup>&</sup>lt;sup>2</sup> The Instrumentalist, Woodwind anthology: a compendium of woodwinds from instrumentalist, vol 1,1983.

### <Articulation>

I would like to define about articulations before the make categorization of the type of articulation. The articulation is used two meaning. The first meaning is the (group) shall be divided into group of smaller units phrase.

Motive-2 bars.	Phrase4 bars.	Phrase4 bars. Period or sentence-8 bars.
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The meaning of one of the articulations is "to break the sound". In other words, staccato or staccatissimo or non-legato and so on. It is to be also used articulations meaning as known as the (so-called) that you play it off like legato (non legato), the sound. Wind instruments produce articulations by tonguing, and how are big important articulations that it change the story of the music depend on how you control articulations.

People use of the tongue to stop the air into the instrument. For example, the syllable "dah" is demonstrates the correct placement of the tongue to articulate notes. In general, Players use the near tip of the tongue the syllable "Tu" or "Ta" is the preferred articulation. However, different articulation markings require different tongue placement.

If you want to make faster phrasing you can use often the double tonguing. The syllables are "da-gu" or "du-gu" or " La-Lu" is used. Mostly jazz improvisers using double tonguing as a "du-gu" than "ta-ka". We called Jazz-legato double-tonguing. Smooth phrasing passages may require an articulation more reminiscent of the syllable "la," while heavy, sharp notes may be attacked with an articulation similar to "Tha".

Some of wind jazz players are using "doodle tonguing." The name of this articulation comes from the sound. Doodle tonguing is achieved by moving the tip of the tongue up and down quickly to block the air stream momentarily on the way up, and again on

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the way down. But it is interesting about how becoming into the jazz flute tonguing. I guess Doublers players are mostly saxophone players. They bring out into the flute so

that it comes out new articulations as a jazz tonguing.

There are many basic types of classical articulation, each with a different effect on how the note is played. In music notation articulation marks include the slur, phrase mark, staccato, staccatissimo, accent, sforzando, rinforzando, and legato. A different symbol, placed above or below the note (depending on its position on the staff),

represents each articulation.

Below are a few definitions of the more basic articulations:

**Tenuto:** Hold the note in questions its full length (or longer, with slight rubato), or

play the note slightly louder.

Marcato: Indicated a short note, long chord, or medium passage to be played louder

or more forcefully than surrounding music.

Staccato: Signifies a note of shortened duration

*Legato:* Indicates musical notes are to be played or sung smoothly and connected.

There are jazz basic articulations. The use of other classical articulations depends largely on the style of music being played. However the strong single tongue and smooth legato or detached are appropriate for swing and bop style. And double tonguing is more effective in rock or Latin music. Because It towards straight eighth

and sixteenths.

Below is an interview with Hubert Laws that explains about the techniques and articulation. After reading this article, I have amore interesting opinion of ideas for

my research.

< Flute improvisations by Hubert Laws>

"The improvising flutist need not limit himself to one color but should feel free to experiment with various sounds to enhance his individual musical personality. For example, I recently have begun using an electronic attachment to my flute which not only amplifies the initial sound but divides it into octaves, and synthesizes other instrumental colors such as the bassoon, saxophone, bass clarinet, etc. Other sound variations have included humming in

unison or harmony with the natural sound of the instrument. Also, bending the noses, i.e. intentionally making them flat or sharp (by turning the lip plate in or out) helps to protect emotional expression common in the blues.

Finger technique is another important consideration. Although there are different approaches to positioning the flute for playing, I personally prefer balancing rather than holding it since this gives greater mobility of fingers. The instrument is held when support is given under the tube (usually by the thumb of the right hand and/or the index finger of the left) but balancing is achieved by employing counteracting pressure of the mouth, right and left hands against the sides of the tube. This of course is limited to the C flute, alto flute and piccolo, since the bass flute is usually too heavy to balance in this way. To improve smoothness of execution and avoid key noises, try keeping the fingers in an arch and close to the keys even when not being used to depress a key. Of course when special effects such as "slapping" the keys are used, this suggestion can be overlooked. While there are standard fingerings found on widely distributed fingering charts, the "jazz flutist" should always feel free to experiment with new finger combinations. Who knows what might be discovered? Remember, you are a composer as well as a player. Consequently, fresh sounds will be more than welcomed." 3

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<sup>&</sup>lt;sup>3</sup> Hubert Laws, Flute improvisations by W. T. Armstrong Company, 1972.

# <The history of jazz flute>

The flute comes closer to the human voice than to any other instrument. Music teachers tirelessly tell students to 'sing' through their instrument, even when such advice is strictly figurative. With the flute, however, a player really does sing, sometimes literally. As for jazz, the flute was orphaned until 1956, when Down Beat adopted a new Readers poll category initially won by Bud shank, then monopolized by Herbie mann (1957-1970) and Hubert Laws (post-1970)

"The flute was not widely used in early jazz, although some ragtime arrangements call for it.

The timbre and the limited dynamic range of the instrument and its associations with classical music caused it to be perceived as unsuitable to big band ensembles and unable to swing convincingly."

"Before the use of amplification became common practice in the 1930s, jazz flute players were restricted to the upper range of the instrument to be audible." 5

"Among the earliest jazz flute recordings is "Shootin' the Pistol," performed by Cuban clarinettist and bandleader Alberto Socarras with the Clarence Williams band in 1927."

"The first jazzman to make extensive use of the flute was Wayman Carver, a saxophone player who from 1932 specialised in flute. He recorded flute solos with Benny Carter and with Spike Hughes in 1933, and played and recorded with the Chick Webb band for several years, soloing on flute on tracks such as "Sweet Sue", "Down Home Rag" and "I Got Rhythm". <sup>7</sup>

<sup>6</sup> Lewis Poter, *The new grove Dictionary of Jazz*, second edition.

<sup>&</sup>lt;sup>4</sup> Lewis Poter, *The new grove Dictionary of Jazz*, second edition.

<sup>&</sup>lt;sup>5</sup> Guidi Peter, A short history of jazz flute, 2012.

<sup>&</sup>lt;sup>7</sup> Brian Case, Stan Britt, *The Illustrated Encyclopedia of Jazz*. New York: Harmony Books, 1978.

#### <Jazz and world music flutists stream>

(1932). 'Wayman Carver'-

(Before 1950). It was inherently unsuited to jazz. It was found to be possibility from West coast Jazz from some of composer (Pete Rugolo, Shorty Rogers, Marty Paich).

(1953) 'Frank Wess' from Count Basie's Band.

(1956) Down beat Annual readers poll 'Bud Shank' was winner.

(1956-1960) 'Bobby Jaspar' and 'Herbie Mann'. They were probably the first jazz musician to base a career on playing flute (though they also played saxophone professionally).

(After 1960) 'Sam most', 'Sahib Shihab'. They were among the first persons who can sing and hum into the flute while playing. 'Yusef Lateef' found similar techniques and unusual spoke sylables articulations- Many saxophonists achieve to be good flutists including 'James Moody', 'Charles Lloyd', Eric Dolphy', 'John Coltrane'. 'Paul Horn' He played with beautiful sound in unusual acoustic setting. Because He travelled to India and around asia. 'Jeremy Steig' He could play with rough tone, key clicking tone, air sounds over the flute. 'Hubert Laws' He has classical techniques background and He could be adopted to bop and modal jazz. He bring out classic music into the his compositions.

(After 1970-1980) 'James Newton', 'Lloyd Mcneil'. They figure out experimental improvisation.

(After 1980-1990's) 'Dave Vallentin'. He brings to the flute into the Latin Jazz music setting.

# < Musicians of instrument configurations >

"The jazz piccoloist Many free-jazz wind players have used piccolo on occasion, notably those connected with the association for the advancement of creative musicians, for example 'Joseph Jarman' and 'Roscoe Mitchell' 'Anthony Braxton' and 'Douglas Ewart' and 'Hubert Laws' played piccolo on the album which is 'The Laws of Jazz'(1964,Atl.1432). 'Marshall Allen' palyed piccolo with Sun Ra which is notable solos in Sun Ra's album. 'On a house of beauty from The Heliocentric Worlds of Sun Ra, ii (1965). Most of piccoloists play fast phrasing of solo and melody."

#### The jazz alto flutist

"The alto flute has been used in jazz and free improvisations. Herbie Mann and Bobby Jaspar both made albums with alto flute. For example is' Mann's Tutti Fluttie' from the album Flute Flight. And the other jazz musicians are Bud Shank, Paul Horn. And for free improvisatiors are Jarman, Mitchell, and Braxton."

### The Bass flutist

"The main problem of bass flute embouchure is that the often flutists already have problems with an incorrect fundamental approach to the making the sound in clearly. But even it has been used somtimes in jazz cene by Jimmy Giuffre and the other musicians are Vinny Golia, Henry Threadgill."

#### The Ethnic flutist

People divide the flute into 4 or 5 different flutes. It depands on materials of the instrument. These are bamboo,wood,metal,ceramics,and plastic. Yusef Lateef recorded with wood and bamboo flutes. Roland kirk played Nose flute and concert flute simultaneously. African,Asian,and ethnic European flutes were bring out to the jazz cene. People start to make Avant-garde groups and make approach to free improvisation.

<sup>&</sup>lt;sup>8</sup> Stanley Sadie, The new grove Dictionary of Jazz, 180.

<sup>&</sup>lt;sup>9</sup> Stanley Sadie, The new grove Dictionary of Jazz, 1980.

#### <Articulation effect>

The Jazz players have own specific articulation and techniques. I would like to introduce how you can make choices in the different sound and how you can build up articulation and techniques into your idea of improvisations. There are different articulations and phrasing techniques (Phrasings refers to an expressive shaping of music and spacing of the notes)

#### 1.Accent

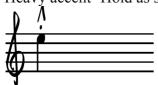
-"Heavy accent- Very strong and tough sound. It's important to play length of note and volume. You should keep full value". <sup>10</sup>



-Heavy accent(jazz staccato)-keep the note 2/3 longer.'Dot Attack'



-Heavy accent -Hold as short as possible



-Lester young half note-Doot Attack



### 2.Staccato

-Staccato-Short and light tonguing. Classical staccato.(Dit Attack) It's different classical staccato with latin music staccato. That is more stronger and shorter. This is

<sup>&</sup>lt;sup>10</sup> Horace A. Young, Improvising Jazz flute, 1988.

more close with staccatissimo.



-Staccatissimo- Hold 1/4 length of the note. Play very short.

-"Half Staccato(Mezzo Staccato)-Hold 3/4 length of the note". 11

-"Legato Tongue-we called with Legato staccato. Hold note full value. Play softly.(Dod Attack)".



#### 3. The Shake and Trill

We call Tremolos. Most of Jazz players playing minor 3rd upward virations. These techniques produced dramatic effect in the music. It becomes fast repetition of a single note sound or fast alternation of two different notes. The trill between half step and whole step notes more than a tone apart. And the shake is an upward movement of notes. General increases the interval of movement between minor and major thirds.



\* Tone color trills -You make trill between the normal fingering and a different changing the tone-color trill. These trills more often change the pitch. And It's difficult catch the movement of pitch.

<sup>&</sup>lt;sup>11</sup> Mel Bay's, *Jazz flute studies*, 1980.

<sup>&</sup>lt;sup>12</sup> The Instrumentalist, *Woodwind anthology: a compendium of woodwinds from instrumentalist*, *vol 1*,1983.

#### 4.Indefinite sound and pitch (Ghosted note).

We called ghosted notes or indefinite sound. Ghosted notes have the same value as notes that are not ghosted but are performed with little or stop sound. It does not allow the note to sound as loudly as other surrounding notes. Some ghosted notes can be inaudible while others are heard only slightly. Ghosted notes designate by 'X' shaped note heads. <sup>13</sup> There are some ways to play ghosted notes. First, when using ghosted notes, players have to blow much less air than other main notes. And you can play half tonguing articulation to mute the note. Second, when producing the ghosted notes, you stop the tongue and close the airflow at the moment. In other ways, you can make 'Ht' sound. Mostly The ghosted notes notation may be hide in the original.



#### 5.Glissandi

This is a slide from one note to another note. Glissandi can make Category. These are bend,flip,smear,slide,lift.

#### -Bend

General technique is the pitch bend, we called glissando. There are two different kinds of glissandi. The first one is that players move finger and make glissandi sound and another one is the lip glissandi. It can be make rolling the mouth piece in, dropping head or jaw.( you can use the slide head joint). It's easy to make bending pitches in the first octaves more than high(third)octaves. If you want make fingered glissandi you have to use are open-hole flute. it can't be done on a closed hole model.

(I have an examples from 'Horace A. Young, Improvising Jazz Flute.)

-Flip

Sound the note, then raise the pitch, and drop into the following note.

<sup>&</sup>lt;sup>13</sup> Tracy Lee Heavner, Saxophone secret: 60 performance strategies for the advanced saxophonist.

#### -Smear

Slide into the note from below and reach the correct pitch just before the next note.



### -Short gliss up

Slide into the note from below(usually one to three steps).



### -Long gliss up

Same as previous, but with a longer entrance.



# -Short gliss down

Slide into the note from above.



# -Long gliss down

Same as previous, but with a longer entrance.



(I found one of composition blues song form Robert Dick. He indicated specific techniques on his composition. I will patch the score.)

### -Short lift

Approach the note via chromatic or diatonic scale beginning about a third below.



#### -Long lift

Same as a previous, but with a longer entrance.



# -Short spill

Rapid diatonic or chromatic drop.(The reverse of the short lift)



#### -Long spill

Same as previous, but with a longer exit



### \* Vocal glissandi

A practice guide for composers and performers.2013. by Carla Rees) "This special techniques is playing sound around pitch with singing. This Interference can be an effective alteration of tone color. If you make vocal glissandi sound louder And high pitch note and then you can hear an extremely effect." <sup>14</sup>

<sup>&</sup>lt;sup>14</sup> Carla Rees, A practice guide for composers and performers.2013.



Carla Rees, A practical Guide for composers and performers, 2013.

# <Different Techniques>

#### 1. Altered fingerings.

This fingerings referred to as the 'open tone hole' model. The usefulness and desirability of these fingerings may be recognized only by the more astute performer in as much as the control of dynamics and intonation are not indigenous to the performance of the elementary player. The altered fingering must have a full sound and open throat.<sup>15</sup>



Mats Moller, New sound for Flute, 2005.

### 2.Quarter tones

This is not standard techniques such as unique fingerings or by the player handle their embouchure to play at leastways quarter tones, if not a unit scale. It's difficult to reach and catch the quartertones. You need to hard work with system. So The one of the flute maker 'Eva Kingma' makes quartertones flute. Finally ,You can use the 6 or 7 quartertones keys which is you missing form french model flute.

<sup>&</sup>lt;sup>15</sup> Book A modern guide to fingerings for the flute ,Featuring James Pellerite as Author and performer (Indiana University)

#### 3. Key Slap

There are percussive effects such as percussion with air and percussion without air. The percussion with air means that the tone should be audible but very soft so that the click of the keys can be heard.

#### -Key click(Key percussion)

Percussion without air is the clicking of the keys only. The clicking can be done with the last finger to the right in use at the time, or several fingers may be used if necessary to make it heard. The G key can be used when it is convenient to click the tones that use the right hand-D,E, and F, for example. When you make key clicking you have to close a key strongly with impact but without air stream.



This is from Destiny 21.5 by Varese

#### -Slap tongue

This technique which sounds very similar to the pizzicato of string instruments. It is close effect with bass slap. You touch the tongue behind of front teeth or you have to move the tip of tongue out of the mouth. And you can make the whiff and short notes without any air pressure.



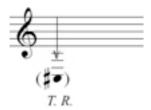
Mats Moller, New sound for Flute, 2005.

#### -Tongue ram

Tongue ram is created by closing the mouthpiece with the whole mouth, and then making a big and very rapid movement with the tongue, against the teeth. The easiest

<sup>&</sup>lt;sup>16</sup> Alexander Lesueur, Special effects in contemporary music, 1967.

way is to say "HOT!" or "HT!". The tone which is produced will sound a major seventh below the fingered one.<sup>17</sup>



www.matthias-zieger.ch

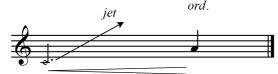
#### -Flutter- tonguing

You use the tongue make, the effect can be made harsh, whereas by using the throat (as in gargling) it can be made smooth. It is alike the sound as tremolo of a bowed instrument. The important thing is that you have to make tongue is very relaxing during the playing flutter-tonguing.



4. Jet whistle or air rush(Strong air stream without tone)

A jet whistle is produced when the player places the mouth over the embouchure hole and blows a stream of air into the flute. The pitch,tone quality, volume,and duration of the jet whistle are effected by choice of fingering,breath pressure ,vowel shape of the mouth,and angle of the embouchure hole relative to the lips. The jet whistle sound pitches are a half tone higher than normal tone. For instance, When you press fingering on C note, it produce sound C sharp sound. And sometimes you can move fingering on scale.you can hear the sound similar to aeolian sound ,but stronger and louder with a more whistling sound.



Carla Rees, A practical Guide for composers and performers, 2013.

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<sup>&</sup>lt;sup>17</sup> Mat's Moller, Attack and Influence on the Air Stream.

#### 5. Whistle tones

These techniques is creating whistle tones with flute. You blow warm air coming out into the hole. The sound is very quiet and soft. Usually, if you blow air little of tightening the embouchure, you can make the whisper tone clearly. And you have to make open the hole more than normal way and slightly increasing your air pressure and also you have to controlled embouchure very well and produced a very low air pressure. The whistle tones is a quiet and somehow uncontrollable effect. It 's hard to control the volume you should focus on your embouchure and angle. The easiest arrange is top register which is based on harmonics system. In the other hands, lower pitches extremely difficult to control and project. If you want make accomplishment with that It has to required amplification or silence in the music.



#### 6. Harmonics

"The pitch of the indicated note is usually which is heard, but it is played by using the fingering of a lower note which can be overblown to produce the desired pitch. The notes in the lower register can be overblown to produce six or seven members of their overtone series. Harmonic fingerings may be found by going down a perfect fifth, an octave and fifth, or two octaves. The performance of these effects requires lip flexibility which can be developed through the practice of harmonics". <sup>18</sup>



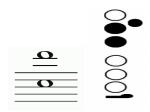
www.flutecolors.com

<sup>18</sup> Alexander Lesueur, Special effects in contemporary music, 1967.

### 7.Polyphony

### -Multiphonics

"Two or more tones sounding at the same time (chord). Performed (most often) with alternative fingering, combinated with changing of the embouchure, increased or reduced air pressure and possibly turbulence of the air stream. Most often written with chord and fingering. It is also possible to trill in or between multiphonics". <sup>19</sup>



www.flutecolors.com

#### -With voice

"Singing a different pitch from the one played. written is one or two voices. sing and playing a different descant, the two melody part in counterpoint".<sup>20</sup>



<sup>&</sup>lt;sup>19</sup> Mat's Moller,. New sound for flute,2005.

<sup>&</sup>lt;sup>20</sup>Mat's Moller,. *New sound for flute*,2005.

# <Representative Jazz flutists>

#### 1. Sam most

He was an American bebop flutist and tenor saxophonist. Born in Atlantic City, New Jersey, (December 16, 1930 – June 13, 2013) (His first recording at age 23, a single entitled "Undercurrent Blues", clearly established him as the "first bop flutist." The very next year he was awarded Downbeat Magazine's "Critic's New Star Award". A true pioneer and innovator. He considered the possibility to hum and play notes at the same time. The later on so many famous jazz flute players (Rahsaan Roland Kirk, Yusef Lateef and in rock by Jethro Tull's Ian Anderson) try to play in their music. He had a the discovery story of this technique. He had an interviewed with 'The Times 'in 1998 "I was living in an apartment in New York in the early '50s, and I couldn't make a lot of noise late at night," "So I found that by standing in the closet playing and humming the same notes, I could hear myself and not disturb the neighbors."

-Specialist

Sing and hum into the flute while playing.

He used a lot of time single tonguing in bebop playing.

#### 2.Dave valentine

Born in South Bronox (April 29, 1952). He is a flute specialist. Mostly he play Latin music. His first instrument was Latin percussion when he was teenager, and he switched to the flute. So he has an important potion for improvisation which is percussion effect in the playing. (He soon developed his own unique formula for presenting Latin sounds to a decidedly non-Latin audience. Valentin's music is not typical Latin dance music, nor is it Latin jazz of the bebop variety. His flute playing is technically and rhythmically.<sup>21</sup>

-Specialist

Latinmusic, harmonics, Glissando, Double, Flatter tonguing, Tone developing.

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<sup>&</sup>lt;sup>21</sup> Horace A.Young, Improvising Jazz flute.

#### 3. Yusef Lateef

His real name is 'Yusef Abdul Lateef'. Born in William Emanuel Huddleston(October 9,1920-December 23, 2013) He is main instruments were the tenor saxophone and flute. He also played oboe and basson both rare in jazz, and also used a number of non-western instruments such as the bamboo flute, shanai, shofar, xun, arghul and koto. So that he could reach out special wooden sound with concert flute. He desired for nature sound into the composing and improvisation. He is known for having been an innovator in the blending of jazz with "Eastern" music. <sup>22</sup>Peter Keepnews, in his New York Times obituary of Lateef, wrote that the musician "played world music before world music had a name."

-Specialist

The doit, Whistle tones, Quarter tones, Spills,

-Album 'Beyond the sky' ,song name is 'Beyond the sky' ,feat,Adam Rudolph,META 2000.

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<sup>&</sup>lt;sup>22</sup> Encyclopedia of Jazz Musicians. Retrieved 2013.

<sup>&</sup>lt;sup>23</sup> Peter Keepnews "Yusef Lateef, Innovative Jazz Saxophonist and Flutist, Diesat 93", New York Times, 24 December 2013.

#### <Flamenco Flutist 'Curro Cueto' interview>

I have done one interviewed with Flamenco Flutist 'Curro Cueto'.(2013) I made an interview summary.

"I usually used techniques which are bend, smear, sound developing, key click, singing and playing, strong single note and accent. Most of time I take the deep breath from lung part while playing helps to produce strong accent and tone developing. And I don't move head joint when I playing bend sound. I used to play moving lip or fingering. My flute should play with steady and clear sound. Sometime I used to play moving lip or fingering. Because it's easy to change embouchure and pitch when you are moving head joint. So it's dangerous.

Normally people set the microphone and put it about halfway down the tube, from the top. If you do not mind get the breath noise. But I used to using breath sound and smear sound so that I put microphone in front of mouthpiece or little bit upward place.

I have many favorite Flutists. But if I have to pick someone, I can say 'Jean-Pierre Rampal', 'Jorge Pardo'. They have such individual flute sound, techniques and experimental spirit in the music. I used to follow to singing melody when I am playing flamenco music. I know that it's different rhythm and sauce for improvise between jazz and flamenco music. But I know one thing which is important for playing improvisation that you have to breath and accent, articulations such as a singing."

### <Conclusions>

After spending for a whole year doing research, I come to realize that I did not know the full details of all different techniques and articulations needed in improvising. Each musician has their own unique way of improvising and their musical abilities and their environment influence their development of their techniques and articulations

Personally, I couldn't play a specific idea or certain melody that goes through my head right a way. I have to spend a lot of time working on it so that this can be done, much more naturally in the future.

To be able to improve in good musical context, I have to master his/her techniques and articulations. First, It has to come from their own individual skills. Otherwise it could affect the other elements of their performances such as timing, rhythm, dynamics and phrasing.

Also I have to be aware when I'm using the different techniques such as the alternative fingerings and tone-color trills during my performance. This is become these different techniques had to be used in tempo and I have to know how it will affect the sound of my tone. I have to achieve clean and fine techniques to be able to play the different ideas that comes to mind with a flexible techniques and articulations. I can easily my music well and it is better into any style of music while enjoying at the same time.

There is this specific interview that I have come across which is similar my thinking. 'Stage-fright and Relaxation' By Hal Galper, Expanded from the original article published in the Fall 1989 issue of the IAJE Journal

"Because of the way the ear works it is impossible to analyze the way you're playing while performing. The ear, like the brain, works in a linear fashion. Although the ear can hear many different ways, it can only hear one way at a time. Listening how you sound while you're playing (hearing "inside" the music) is one way of hearing, listening to how you sound on a tape (hearing "outside" the music) is another. When trying to analyze how you sound while playing, you're trying to hear two ways at the same time and one can't be hearing "inside" and "outside" the music at the same time. As soon as you try to hear "outside" while playing, you become excessively self-

aware, which can then create apprehension. The desire to self-analyse comes from one source only, over-concern about "how do I sound?" You can't care how you sound and be involved in your performance at the same time. When you become overly concerned with how well you are performing, the ego becomes involved and self-image become too important. While playing, one can only get "inside" the music and as mentioned earlier "hope it comes out okay."

"The playing attitude is developed by getting on the bandstand, forgetting everything you've ever practiced, and just "going for it and hoping it comes out okay." "Going for it" is often defined as "Faking it." "Faking It" is a very sophisticated process that can only be learned from years of trial and error. The feeling of "Faking It" is often described by musicians as "going out there without a net." Getting used to this feeling can be, at first, unsettling. It takes time and experience to get comfortable with it. The only way to get good at this process is by doing it over and over until you get it right. There is no shortcut to this process. It can only be developed by practicing a "devil may care" attitude then bringing this attitude to the bandstand while not being concerned about being perfect or making mistakes." "All the great players started by "Faking It." In their early years it was obvious to the listener that they were trying to learn how to do this. Eventually their ability to fake it became so highly developed that the listener could not tell that the advanced player was faking it."

One of my goals would be to try to compose songs with different techniques and articulations. I want to put special techniques and different articulations in these tunes. So that I also can learn from it increase my individual colorations. Eventually When I improvise, I want to be able to express all of my identities with good musical controls. All through my research I dreamed that I want to be flexible and free with my flute playing in the near future. And I am certain I can achieve it with this research.

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