



## SENSITIZING STUDENTS OF PERFORMING ARTS ON THE INFLUENCE OF AIR IN HEARING HEALTH EDUCATION FOR MUSIC MAKING IN UNIVERSITY OF JOS

**Owojaiye, Sunday Oni<sup>1</sup> and Elemukan, Isiah<sup>2</sup>.**

<sup>1</sup>FACULTY OF EDUCATION DEPARTMENT OF PHYSICAL AND HEALTH EDUCATION UNIVERSITY OF JOS P.M.B 2084, JOS PLATEAU STATE NIGERIA WEST AFRICA

<sup>2</sup>DEPARTMENT OF SPECIAL EDUCATION FACULTY OF EDUCATION UNIVERSITY OF JOS P.M.B 2084, JOS PLATEAU STATE, NIGERIA WEST AFRICA.

### Article Info:

**Author(s):**

Owojaiye, Sunday Oni and Elemukan, Isiah.

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**Corresponding Author:**

**Owojaiye, Sunday Oni.**

Faculty of Education Department of Physical and Health Education University of Jos P.M.B 2084, Jos Plateau State Nigeria West Africa.

**E-mail:**

isojaiyeomoobaowojaiye@hotmail.com

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### Abstract

*This paper “sensitizing students of performing arts on the influence of air in hearing health education for music making in University of Jos . Relevant cases dealt with are 1. The relationship of air to breathing; 2. Breathing to produce sound 3. Health hazard of the respiratory tracts; and 4. Air-passage health practice. It was concluded that the efficacy of air and air passage had been followed through the need to adhere to air health procedure, avoidance of humidity and coldness and excessive heat, adequate healthy habit become imperative. It was further recommended that 1. Examination of the nasal, larynx and the related organs should be embarked by the college authority through invitation of otorhinolaryngologist and engaged for verification of music students’ state of respiratory track. Student should be charged certain fee to commensurate with the degree of air-passage ill-health.*

**Keyword:** Influence, air, hearing, health, music making.

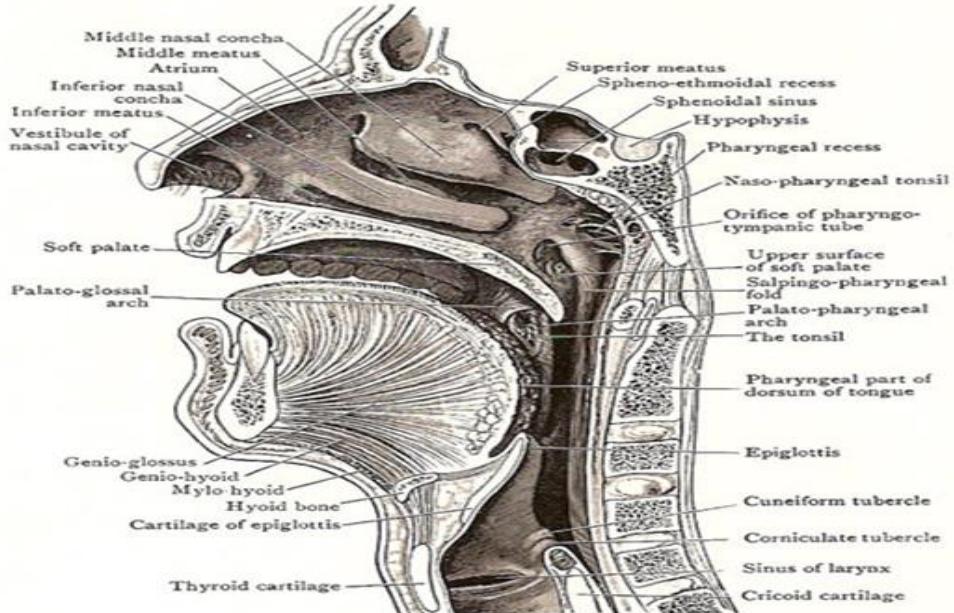
### INTRODUCTION

The necessity of the air in breathing is accredited by its capacity to enable a person to produce sound by its mechanical expertise as viewed in phonation. That air passage via the respiratory track has become inevitably accredited, for examination cleansing and reformation. The air passage in normal and healthy human is very necessary for survival and it is specially demanded for the music makers. This is because, if the child must be developed musically in this age of technological advancement to music can serve as technique of modernizing the child's. Ethical, moral, religious, and cultural development for peace and stability in in the country. Then the music teacher-students' must be aware of the process of the music's physiological apparatus. It would not be over-estimation to elucidate that the, health of the nose, tongue, teeth, throat, esophagus auditory and nasal cavities cumulated into a bond of organs for the possibility of verbalization which is the vehicle of lyrics pronouncement. After all, respiratory' track require adequate functioning for health in verbalization, speech breathing and general survival (Marshall and Ox Iade, 1999, NIOSH 2003, Ologe 2000 and Nakai 1997).

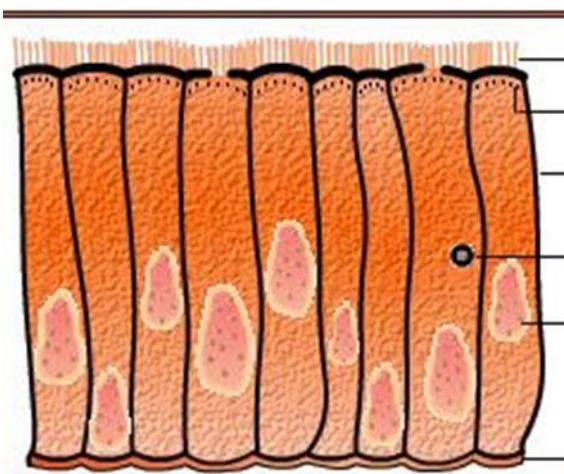
The purpose of the study is to look at the air and its' utility in sound production. To teach the 'music makers' to desist from using their mouth, nose, throat for other activities rather than music making. To expose the

delicate nature of the throat, nose, mouth and ear to the music makers. To show the musician that the musical parts in the body deserve adequate its relationship to the music makers in Nigeria. And provide a lesson for music teachers in which they can further comprehend music requirement in our physiology make up. Further still, explain further explain the organs that must be taken care of in our body for effective music composition and rendition, sensitize the government to create air passage managers for music makers in Nigeria and annexed to the music making corporation in Nigeria. And sensitive curriculum planners in music to include studies in health education to further bring sensitize curriculum planners in music to include studies in health education to further bring out the perfect ways of taking care of the body for music making. Finally, synthesis of these highlighted requirements of vocalization is viewed with the intent to educate sensitive and provide researchable baseline information for musicians who may require it; since the music is taking a new and sophisticated dimension in Nigeria. After all, music is termed to solve psychological, moral and ethical upheaval (Abiodun 2000 and Ikibe 2000).

This paper covers (i.) relationship of air breathing; (ii.) Breathing, to produce sound; (iii) health hazards of the respiratory tracts and (iv.) Hints on air passage health practice.



**Figure 1:** Sagittal section of the nose, mouth, pharynx and larynx  
 Source: pracy, siegler & Stell, P.M. (1999). A short textbook on Ear, nose a throat: Great Britain: The Chusel Press



**Figure 2:** Ciliated mucous membrane from the linking of the air passage  
 Source: pracy, siegler & Stell, P.M. (1999). A short textbook on Ear, nose a throat: Great Britain: The Chusel Press

## THE RELATIONSHIP OF AIR TO BREATHING

During gaseous exchange, according to Armstrong(2007), Marshal and Oxiade (2008) and Signer and Stell (2011) exhalation occur through which inspiration and expiration of oxygen and carbon-dioxide 0.04%, water vapor and traces of other gases), according to Marshall and Oxlade (1992) and Pracy, Siege and Stell (1999) enters the nose through the nasal cavity through thorax (trachea) to the lungs. There in the

lungs, gaseous exchange takes place in the alveoli or air sacs. The alveolar sacs and alveoli open and because they are surrounded by a network of capillaries, deoxygenated blood finds it easy to pick oxygen and re-activated since they descended from pulmonary artery. The oxygenated blood leave this artery to enter the pulmonary veins. The expired air (nitrogen 7%, oxygenated 16%, carbon-dioxide 45%, water vapor and traces of other gases 5%) is exhaled.

Couldn't the air and air passage be clear of all pollution (Ajaegbu 1985) like cigarette smoking and tobacco sniffing or cocaine/heroin inhalers used for inspiration for lyrics composition and vocalization by musicians? The alveoli is eve described as minute passage which if blocked can cause physiological damage to the process of oxygenated blood formation required activating the musical health of the child. A healthy child could be the best music maker, and excellent lyrics composer. The passage of the oxygenated air and lungs relationship is presented in figure1 as follows: through the nose, the pharynx, the larynx and the trachea into the bronchi, the bronchioles, the alveolar ducts and the alveoli within the lungs and lungs relationship. The air structure is show in figure 1 as follows:

## BREATHING TO PRODUCE SPEECH

In figures 1 and 2, oxygen fill the nasal cavity through anterior nostril and move down into the lungs through the followings:

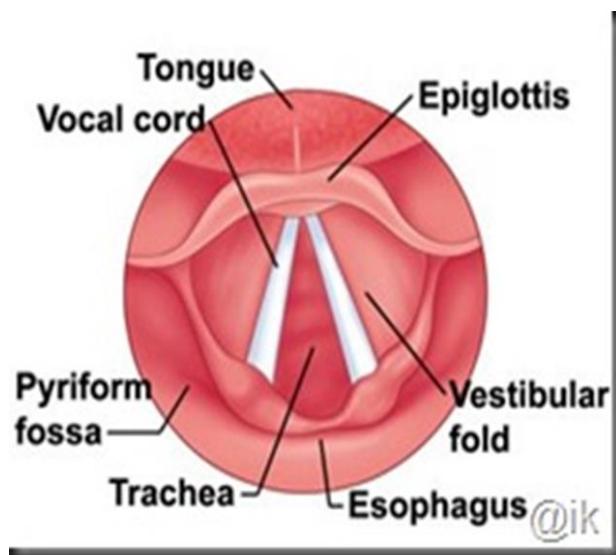


Figure 3: The larynx on mirror examination (indirect laryngoscopy).

1. The bones surrounding the nasal cavity.
2. The pharynx.
3. The pharyngeal tonsil or adenoid
4. The auditory tubes
5. The dynamic oropharynx
6. The larynx
7. The thyroid cartilage
8. The cricoids cartilage
9. The hydroid
10. Epiglottis
11. Arytenoids and cricothyroid.

These structures perform unique function to make the musician produce his/her melodious songs effectively without hitch. However defective structures may cause hindrance for the music production. The functions of each structure are elucidated in table 1.

The dynamic functions of larynx, cricothyroid membrane, vocal ligament, and cricoids membrane and arytenoids cartilage are:

- ❖ “when the intrinsic muscles of the larynx alter the position of the arytenoids cartilages the vocal ligament are pulled together, narrowing the gap between them. If air is forced through the narrow gap, called the clink, during expiration, the vocal ligaments vibrate and sound is produced”.
- ❖ The pitch of the sound depends on the length and tightness of the ligaments.
- ❖ An increased tension gives a higher note.
- ❖ Loudness depends on the force with which the air is expired.
- ❖ The alternation of the sound into different words depends on the movements of the mouth, tongue, lips and facial muscles.

The mechanism of air and vocal cords are presents figures 1-5.

## HEALTH HAZARDS OF THE RESPIRATORY TRACTS

Thus far intricate and delicate position of the organs of sound necessitate that the music teacher performs health functions towards safeguarding these hearing apparatus: in our polluted environment however Ajaegbu (1985) postulated that air-pollution constitute the major menace ravaging the hearing health and speech. Dusts and carbon-monoxide from several media like (sand, corn, pepper and millet grinding mills, bricklayers, road construction, perfume smoke from industry engines, motor-vehicle and train exhausts, cement factories) destroy the nasal cavity and lungs direct inhalation of the smoked and sniffed cigarette, india hemp and cocaine (narcotics) constitute the avoidable health destroyer. Further still, the excessive cold drinks too are injurious to the respiratory tract, catarrh, sinuses and excessive sneezing and coughing, could damage to arytenoids cartilage in the lungs, health hazards associated with air vocal cord are presented in

## HINTS ON AIR PASSAGE HEALTH PRACTICE

Suffice it to say succinctly then, that the proper health practice for musicians, for effective and efficient” vocalization becomes imperative; a use of handkerchief to cover the nose in stuffy and dusty’ environment is a health ethic. Also excessive cold drinks of minerals, kunu, sobo (local drinks) and tea should be avoided. Exposure of the respiratory tract to highly cold or chilly air-conditions should be avoided too. Excessive cold bath could be dangerous for the respiratory tract and therefore should be avoided too. Avoidance of listening to excessive sound or exposure of the auditory organ to cold must be avoided. And finally, visitation of doctors for the pain or injury to ear, nose and throat for examination and treatment should be embarked upon. There should be propaganda on the sensitization of music fans on the avoidance of smoking in the music halls to reduce air pollution. This ENT examination and treatment is available at the otolaryngologist department ‘of university of Ilorin teaching hospital’s. (Ologe 2000).

## CONCLUSION

The efficiency of air and air-passage (respiratory tract) had been trailed through the need to adhere to air-health procedure, avoidance of humidity/coldness of the respiratory tract, adequate healthy habit and examination and treatment of detected defect of the tract. We are in the era of demanded sensitization of Nigerians’ socio-political efficiency through technologically refined music education. It is down on music teachers to embark on examination of their students by recommendation of the followings to the provost for inclusion in the admission requirements music students and fees payable for this health services stipulated in the colleges of education.

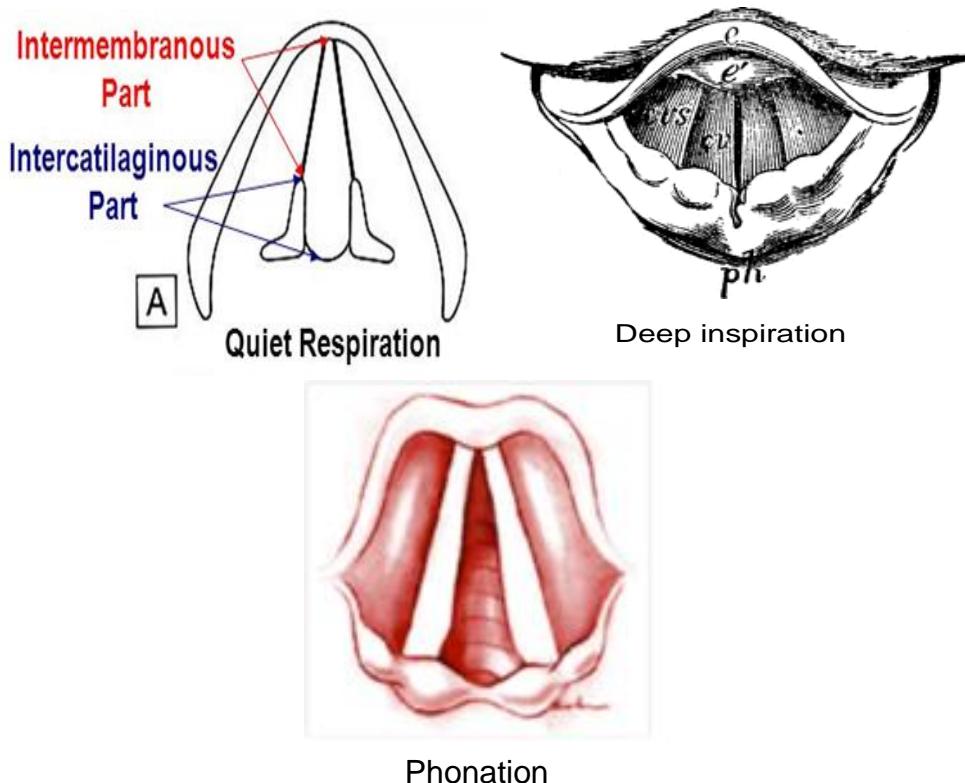


Figure 4: Position of vocal cords compared

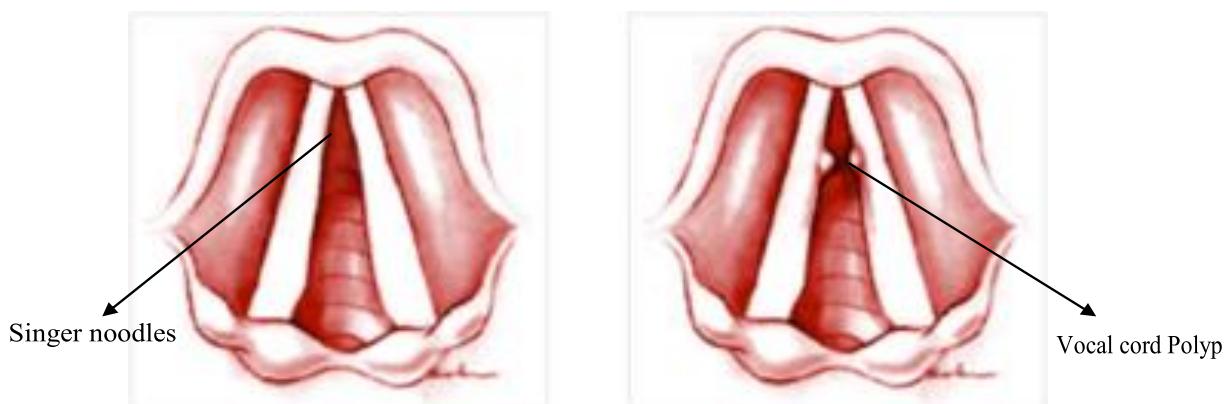


Figure 5: Singer's nodules and Vocal cord polyp

## RECOMMENDATIONS

As recommended by Ologe (2000).

1. Nasal larynx, pharynx examination should be instituted by qualified otolaryngologist in the campus at the registration points for the students to detect those with ear, nose and throat problems.
2. The ENT medical specialist and accompanying ENT nurse must be invited and paid accordingly.
3. The invitation of the ENT surgeon into the

campus is premised on the patient-doctor phobia eradication and students' confidence establishment.

4. The following dynamic (varying and not stagnant) fees could be Earmarked for examination and threatening: and be paid according to the degree of ill-health detect and treated:

- a. Tract necessitating-cleaning - ₦5,500
- b. Tract requiring insertion of nasal Arop

c.	- Spraying of the nose	₦8,500
	-	₦12,500
d.	Packing the nose	
	-	₦18,500
e.	Suction displacement	
	-	₦35,000
f.	Steam inhalation	
	-	₦25,000
g.	Spraying the throat	
	-	₦25,000
h.	Syringe of the ear	
	-	₦25,000

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