THE TEACHING AND LEARNING OF AFRICAN MUSICAL INSTRUMENTS, USING EZEGBE'S FIGURED ORGANOGRAPHIC COMPOSITE NOTATIONAL SYSTEM (EFOCONS)

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Introduction

Musical instruments indigenous to Africa are termed African musical instruments. As the name implies, the materials of construction are sourced primarily in Africa. This does not mean that materials of construction of these musical instruments cannot be bought outside Africa. Indigenous technologists of these instruments are readily available in the cultures that produce them. They constitute means of livelihood to the producers and so serve as incentives to them. This singular factor accounts for why these musical instruments have not gone into extinction since the markets are readily available. The vegetation of a particular culture area affects the type of musical instruments produced. This is highlighted by Onwuekwe (2011) when she opines:

> *There are many varieties of musical instruments in Nigeria as a result of differences in vegetation, climate, occupation and culture. In the south and coastal areas where mangrove forests and swamps abound, it is just natural to produce musical instruments that are made of wood such as the huge wooden gongs. In the Savannah and grassland areas where cattle are reared, the skins of animals are used for construction of musical instruments. (p. 54)*

Ezegbe's Figured Organographic Composite Notational system (EFOCONS) is designed for effective teaching and learning of African musical instruments that are percussive. It can also apply to other percussive instruments outside the African continent. It is a product of Ezegbe's ethnomusicological research at the University of British Columbia Vancouver, Canada. The system is based on numbering parts of a musical instrument capable of producing music in one way or the other. It presupposes a detailed organographical knowledge and study of a

particular musical instrument. It is a composite system that makes use of staff, and other relevant organographical symbols.

Classification of African Musical Instruments

Writing on the classification of African musical instruments Okafor (2005) says: "From the works of Curt Sachs and Eric von Hornbostel (1933), African musical instruments are classified into four depending mainly on the cause of sound generation" (p. 161). In other words, the criteria for the classification of these musical instruments were given by the two German Ethnomusicologists. These criteria include the Idiophones, the Chordophones, the Membranophones and the Aerophones.

The Idiophones

Idiophones are those African musical instruments that depend on the vibration of the entire body for the production of musical sound. The idiophones can be further classified into 3 main categories. These are the struck idiophones, the shaken idiophones and the plucked idiophones.

(i) The Struck Idiophones: As the name implies, the struck idiophones produce sound when struck. In other words, as the entire body vibrates when struck, musical sound is produced. The three musical instruments for Ezegbe's Figured Organographic Composite Notational System fall under the category of struck idiophones – the *udu* (small musical pot), the *ogene* (metal gong), and the *ekwe* (small slit-wooden drum). Other African musical instruments can be used for the notational system depending on choice.

(ii) The Shaken Idiophones: The shaken idiophones are those idiophones that produce sound through the vibration of the entire body when shaken. A typical example of the shaken idiophone is the *ichaka* (the beaded rattle).

(iii) The Plucked Idiophones: The plucked idiophones are those idiophones that depend on the vibration of the entire body for the production of musical sound when plucked. A typical example of plucked idiophone is the *ụbọ aka* (thumb piano).

Chordophones

Chordophones are those African musical instruments that depend on the vibration of the stretched strings for production of musical sound. A typical example of chordophone is Igbo *Une* (musical bow) and Hausa *Goge (*a one-stringed bowed lute with a gourd resonator*)*.

Memberanophones

Membranophones are those musical instruments that depend on the vibration of the stretched skins of animals for the production of musical sound. The dried animal skins are stretched over a chosen resonator without which sound cannot be produced. The resonators could be wooden, metal, gourd depending on the choice of the musical instrument technologist. Examples of membranophone are skin drums of all types like the Yoruba *dun dun* drum, the Igbo *igba* or bongo drum or the *Igbin* drums of Yoruba land.

Aerophones

Aerophones are those musical instruments that depend on the vibration of the air column inside for the production of musical sound. A typical example of the aerophone is the Igbo *ọja,* (wooden flute), Hausa *kaakaki* and horns of different sizes made from elephant tusks and Igbo *ọdụ okike* (elephant tusk trumpet).

It is interesting to note that Nzewi (1991) gives us some criteria for the classification of Igbo musical instruments thus:

> *The Igbo categorize their musical instruments primarily according to the source of sound production thus providing two conjunct folk systems for the classification of musical instruments. There is at the same time recognition of socio-cultural musical importance informed by variety and popularity in the Igbo categorization of instruments. (p. 57)*

He went on to explain the four categories of Igbo musical instruments as:

- The most popular and varied musical instruments are the wooden, metal and membrane instruments, which are melorhythm instruments. These, without producing definite pitches are capable of a wide range of phonic manipulation: to sing, to talk, as well as play percussive roles in ensembles.

- The second in importance are blown instruments which are melody or phonic-effects producing instruments.
- Next are the shaken and pot instruments which play percussive roles in ensembles.
- Finally, there are plucked (soft tones) melody instruments, which are played primarily as solo instruments.

Organology

Organology, according to Ezegbe (1982: 4) is "The scientific study of musical instruments or science of physical description of musical instruments in terms of the classification, the technique of playing, the socio/cultural data, the performance capacity and construction/decoration of the musical instrument." He explained that organology is also concerned with the acoustics of musical instruments which entails the study of the sound as regards the material of vibration for the production of musical sound.

Organogram of the three Igbo musical instruments for Ezegbe's Figured Organographic Composite Notational System

Organogram according to Ezegbe (1982: 5) is "The diagrammatic representation of a musical instrument with respect to the instrument's position, support, performer's position and the playing techniques of the musical instrument. It also includes the hardness scale of material of construction of the musical instrument."

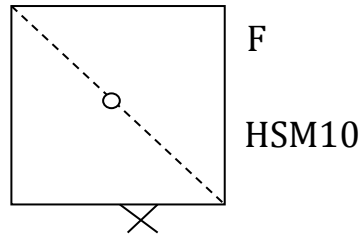
The Hardness Scale of Material of construction of Musical Instruments

Mantle Hood came up with 10 degrees of hardness scale of materials of construction of musical instruments. He was however influenced by the Chinese concept of the classification of musical instruments based on the materials of construction. The degrees of Mantle Hood's Hardness scale of materials of construction range from gourd to metal thus:

DEGREE	MATERIAL
1	Gourd
2	Earth
3	Skin
4	Plastic
5	Wood
6	Bamboo
7	Bone
8	Glass
9	Stone
10	Metal

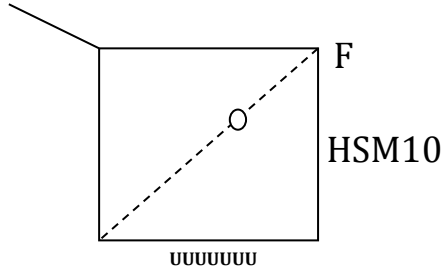
(Ezegbe, 1982)

Organogram for *Udu* (small musical pot)



The Organogram for *Udu* reveals that it is an idiophone being represented with a square. It is being played by a female as seen from the capital letter F at the right side of the square. The figure X under the square shows that the idiophone is supported across the laps. The 'o' at the middle represents sitting position on a chair while the dotted line means that the instrument is held in an angular position. The figure HSM 10 reveals that the *udu* falls under the tenth category of Hood's hardness scale of material of construction. However it should be noted that most musical pots were made of earth, but now, for the sake of convenience, they are made of metal.

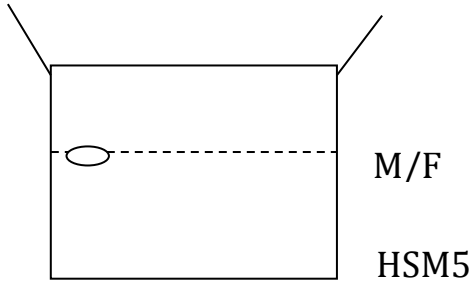
Organogram for *Ogene* (metal gong)



Being an idiophone, the *ogene* is represented with a square. The figure 'F' at the right hand side of the square shows that the idiophone is being played by a female. The sign **uuuuuu** under the square shows that the musical instrument is held with the hand. The dot at the top left corner represents the instrument's support; it is supported with the left hand. The dotted line across the instrument represents the fact that instrument is held in an angular position. The line on top of the left corner of the square represents the fact that the instrument is played with one stick while the figure HSM10 represents the hardness scale of material of construction of the *ogene*. The material of construction of the *ogene* is metal and metal falls under the 10th degree of hardness scale of materials of construction by Mantle Hood hence the number 10 beside the square HSM10.

Organogram for *Ekwe* (slit-wooden drum)

The *ekwe* is represented with the square being an idiophone.



From the Organogram, it is clear that *ekwe* can be played by a male or a female (M/F). The player uses 2 sticks. It is in direct contact with the ground since no figure appears below the square. The figure 0 at the left hand side of the square shows that the player is sitting on the floor or squatting while playing. The figure HSM5 at the right hand of the square represents the hardness scale of material of construction by Mantle Hood. The slit wooden drum is made of wood which falls under the 5th category of the hardness scale of material of construction.

Teaching: Teaching is the art of imparting knowledge to the learner. It entails conscious effort by the teacher to make the learner acquire the knowledge and or skill. The teacher ensures that learning experiences are provided to the learner for effective learning. In his definition of teaching, Kyan (2009) says: "Teaching is a systematic presentation of facts, ideas, skills, and techniques to students."

Writing on the teacher as a learning facilitator in the classroom, Eneasator, (2003) Says:

> *Having created a conducive classroom environment, responsibility now falls on the teacher to make sure that effective teaching and learning are achieved. It is the duty of the teacher to assist the pupils/students to systematically gain knowledge as specified in the curriculum, syllabus and the scheme of work. He or she uses various teaching skills like questioning, planned repetitions, stimulus variation etc. to ensure quality teaching and learning. (p. 24)*

He goes on to emphasize the fact that for a teacher to be able to act as a facilitator of learning, he or she must possess the following qualities:

- Adequate knowledge and mastery of the subject matter.
- Adequate knowledge and mastery of the subject methodology.
- Ability to communicate freely.
- Sound personality.
- Good knowledge of child psychology.

Learning

Learning involves the efforts made by the learner to acquire knowledge. For effective learning to take place, the teacher must provide learning experiences that are relevant to the teaching/learning process. In other words, the emphasis must be on child-centred activities that the learner must carry out in order to learn. In his views on learning Microsoft 2009 opines:

> *Learning involves acquiring knowledge or developing the ability to perform new behaviors. It is common to think of learning as something that takes place in school, but much of human learning occurs outside the classroom, and people continue to learn throughout their lives.*

Writing on the learner-centred education, Chinese Curriculum Development Council. Education and Manpower Bureau in Ho (2007) says:

> *The major goal of the five-year strategy plan in Information Technology for Quality Education, is to initiate a paradigm shift in teaching methods from a largely textbook-based, teacher-centered approach to a more interactive and learner-centered approach (p. 34).*

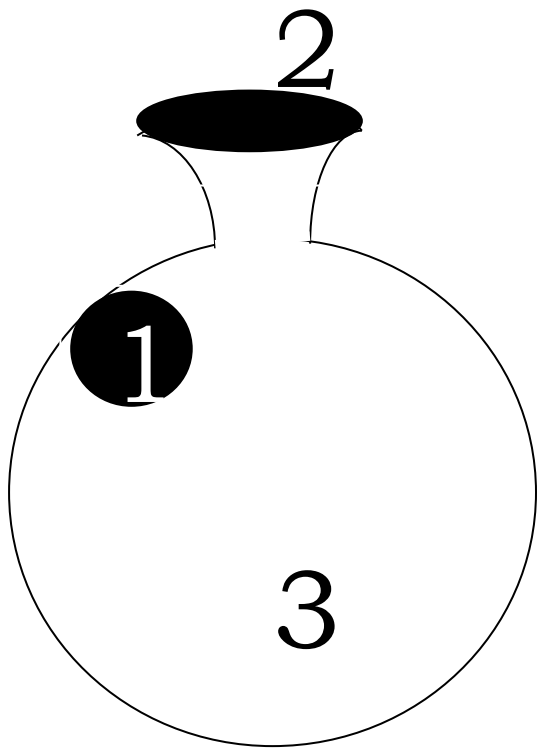
On their views on learning, Roelofs & Houteveen in Koopman (2007) say:

> *Authentic learning denotes a process of learning in which the learner acquires meaningful insights, abilities and experiences that start from intrinsic motivation and build on insights, abilities experiences already present. A first characteristic is that it favors productive learning environments instead of pre-structured learning contents. (p. 157)*

Ezegbe's Figured Organographic Composite Notational System

Ezegbe's Figured Organographic Composite Notational System (EFOCONS) is an invaluable tool for notating music for our indigenous percussive African musical instruments and thus an invaluable aid to the teaching/learning process. This is based on figuring the musical instrument thus:

The Udu (small musical pot)

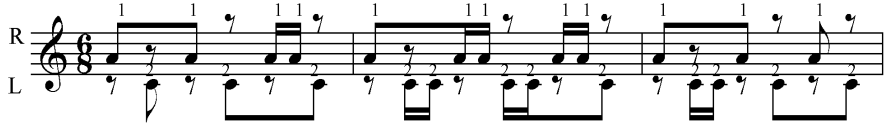


The *udu* (small musical pot) is percussive and so any piece of music composed for it emphasizes rhythmic variation. The music is based on the figures and the player is expected to adhere strictly to the figures on the musical pot. Composing a 24 bars piece of music in 6/8 time to be played on the *udu* using Ezegbe's Figured Organographic Composite Notational System (EFOCONS) we have the following:

***Egwu Udu* (Music for the Musical Pot)**

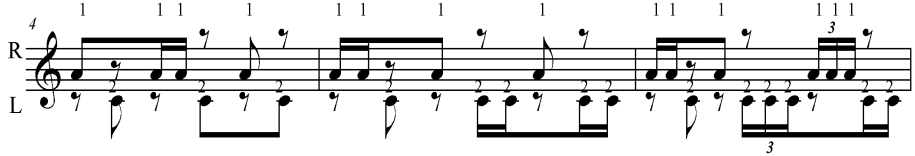
For effective teaching and learning of *egwu udu*, the music should be taken line by line as shown below:

Line One:



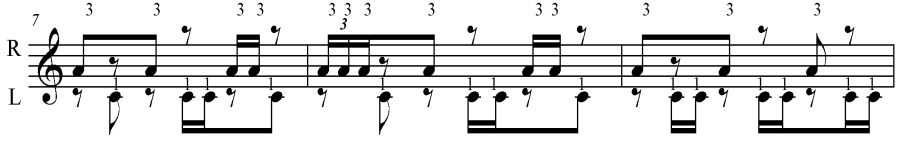
Egwu udu is played with both hands in a sitting position. A closer observation of the music for egwu udu reveals that as the right hand plays, the left hand rests and as the left hand plays, the right hand rests. The only exception can be observed at the final cadence in bar twenty-four where both hands play to end the music.

Line Two:



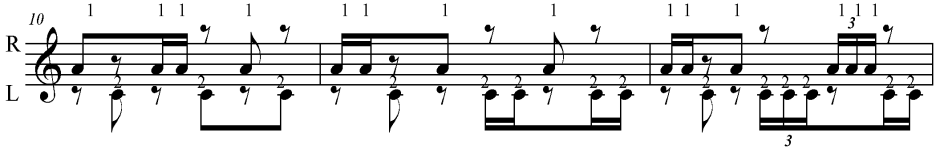
At this stage, the teacher should emphasize the rests so that the learner can apply them adequately. However, the quaver note that forms the unit beat should be pointed out to the learners.

Line Three:



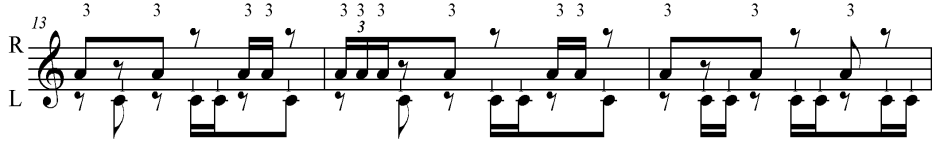
The teacher plays the third line and asks the learners to play. The skills emphasized here are use of examples and stimulus variation since the stimulus varies from the teacher to the learners. The learners take turns to play and by so doing, emphasize the skill of planned repetition.

Line Four:



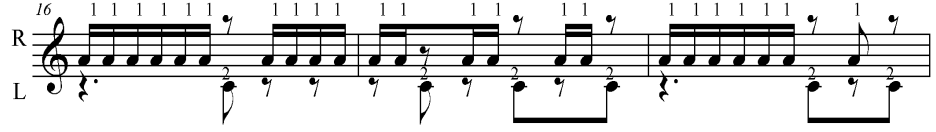
The teaching/learning process continues while the stimulus varies from the teacher to the learner. However the teacher plays the instrument when the learners find it difficult to play any portion of the music.

Line Five:



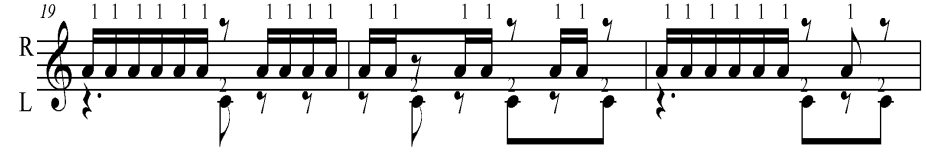
At this point, the learners are encouraged to combine the lines the first two lines, first three, four or five lines. This will help the learners to master the lines, thus the teacher here applies the skill of planned repetition.

Line Six:



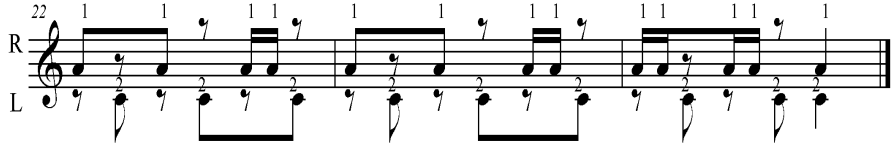
At this stage, the teacher asks the learners questions based on the rhythmic patterns of the music in terms of the differences between the first and second bar, second and third bar, first and third bar. The similarities between two bars are also pointed out to the learners during the questioning skill. Both lower order and higher order questions are asked here to help the learners master the lines.

Line Seven:



At this point, the learners are encouraged to find out through critical observation, similarities and or differences between lines six and seven or between any two lines of the *egwu udu* as directed by the teacher. This critical observation will help the learners to play the music correctly.

Line Eight:



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Line eight, which starts on bar 22 as indicated in the first bar of line eight is the last line of the *egwu udu*. The teacher points out the similarities between any two bars and makes the learners realize the fact that the last beat of the music is a crotchet and both hands play together to bring the music to a conclusive end. At this stage, the learner is expected to master the eight lines. The learners that can play very well are asked to play before the others to encourage hard work. The skills emphasized here are evaluation and closure.

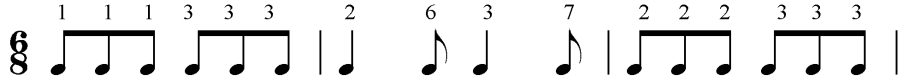
The *Ogene* (metal gong)

Composing a 21 bars piece of music to be played on the *ogene* using Ezegbe's Figured Organographic Composite Notational System we have:

***Egwu Ogene* (Ogene Music)**

The same procedure used for the teaching and learning of *egwu udu* is applied to the teaching and learning of *egwu ogene*. More emphasis should be laid on the activities by the learners than on the teachers' activities.

Line One



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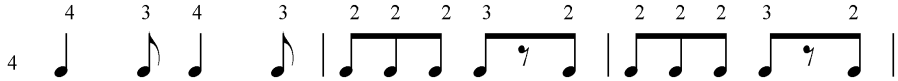
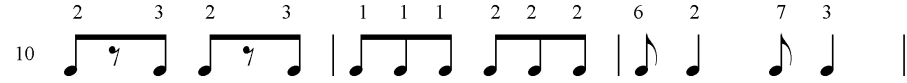


Line Three

Line Four



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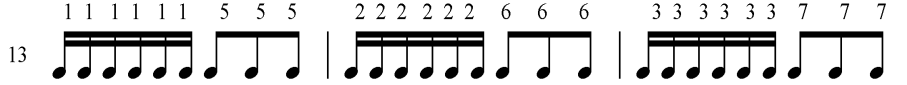

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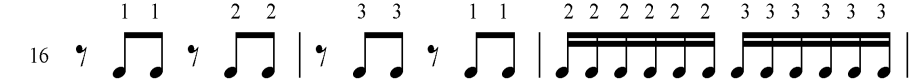
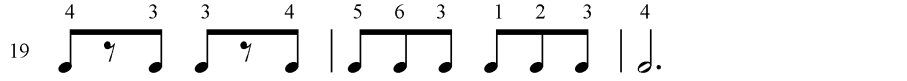
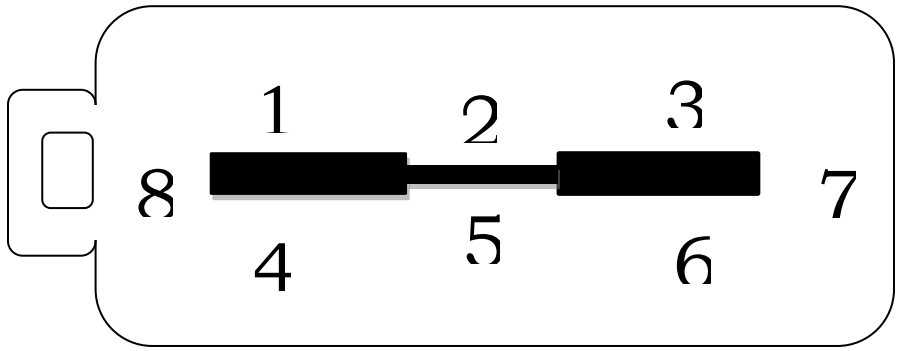


Line Seven



Egwu Ekwe (Music for Ekwe: small slit-wooden drum)

Music can also be scored for *ekwe* using Ezegbe's Figured Organographic Composite Notional System (EFOCONS). The following piece of music in 21 bars is notated for the *ekwe* (small slit-wooden drum) based on 6/8 time.



The procedure for teaching and learning of *egwu udu* and *egwu ogene* is also applied to the teaching and learning of *egwu ekwe*. For effective learning, the lines should be taken one after the other for emphasis.

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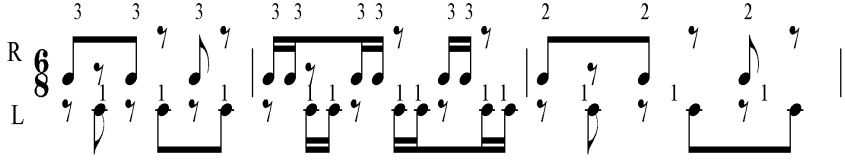

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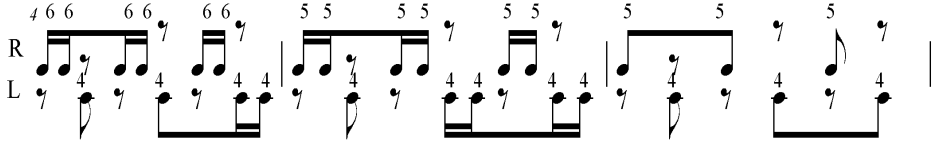

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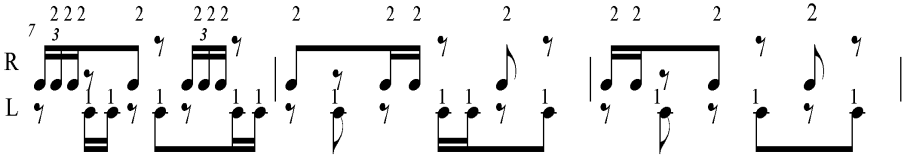

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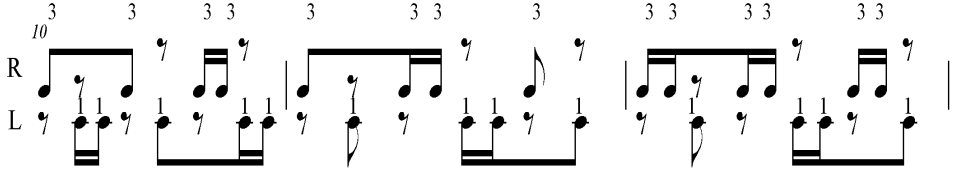

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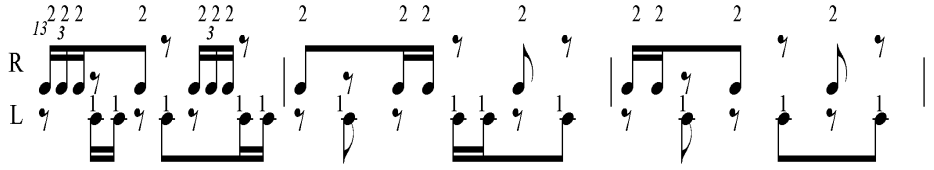

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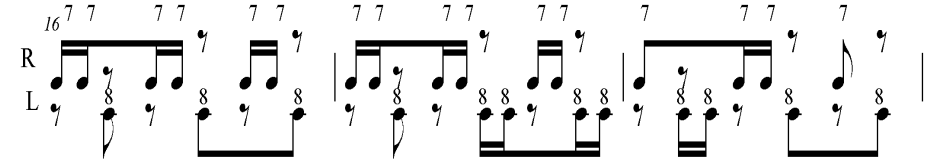

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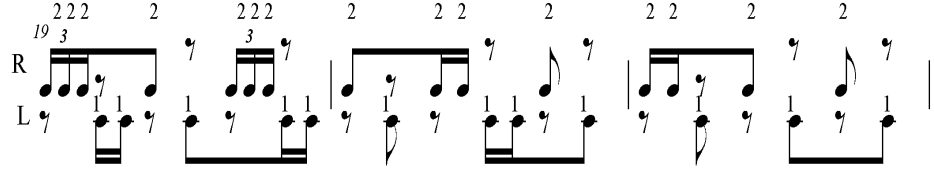

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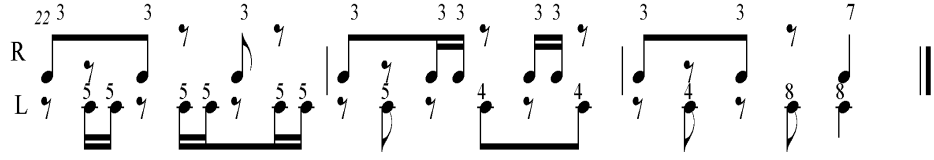

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Problems Militating against Effective use of our African Musical Instruments

Many problems militate against effective use of our African musical instruments. Some of these problems include the general attitude of Africans towards their musical instruments. In the institutions where music is taught, more

emphasis is laid on the teaching and learning of Western orchestral musical instruments, while the African musical instruments are almost always left to the students who are interested. Our indigenous musical instruments are not well packaged and so instrumentalists are faced with the problems of carrying them about, and some of these instruments are cumbersome. Our indigenous technologists seem to be faced with the problem of handing over to the new generation because our young men and women tend to flock to the cities in search of jobs that are not there. These and many other problems militate against effective use of our African musical instruments. In view of the above problems, the following recommendations are proffered. Efforts should be made to change the attitudes of Africans towards their music by the Government trying as much as possible to include the teaching and learning of the indigenous musical instruments and music of the community in the curricular of her schools. If such are taught in the schools, naturally, the students will appreciate their music better and the problem of continuity would be a thing of the past. Some indigenous technologists should be employed in the schools to teach these instruments.

Summary and Conclusion:

The paper looked at Ezegbe's Figured Oranographic Composite Notational System (EFOCONS) as a valuable tool for the teaching and learning of African musical instruments and other percussive instruments outside the continent of Africa. The instruments discussed in this paper belong to idiophones, which are African musical instruments that depend on the vibration of the entire body for the production of musical sound. The instruments include the *udu,* the *ogene* and the *ekwe*. The Organogram of the various musical instruments were given and explained. The *udu*, the *ogene* and the *ekwe* notations were made and all the three pieces of music composed for the indigenous musical instruments are in simple duple time of 6/8 beats in a bar. The process of teaching and learning was highlighted and some teaching skills were emphasized. Teachers were advised to lay more emphasis on the learner's activities in order to provide enough and adequate learning experiences which enhance learning. Some of the problems that militate against effective use of African musical instruments were highlighted and the possible solutions to the problems were proffered.

In conclusion therefore, it is important to point out the fact that Ezegbe's Figured Organographic Composite Notational System (EFOCONS) is a very useful gift to music educators, ethnomusicologists and composers. I therefore strongly recommend that this composite notational system be introduced into the educational system of Nigeria in particular and Africa in general, as it will to a great extent enhance the teaching and learning of percussive musical instruments. The music teacher's role in the upbringing of the child cannot be overemphasized. No wonder then that Kodaly in Ezegbe (1982) says:

> *It is much more important who is the music teacher in Kishveder than the director of the opera house in Budapest … for a poor director fails once but a poor teacher keeps on failing for thirty years, killing the love of music in thirty batches of children.*

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