

Music Pedagogy in a digital economy: A focus on the undergraduate programme of the Department of Music, Nnamdi Azikiwe University, Awka

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Abstract

There are some innovative ways and improved methods of teaching and learning of music in a digital world that we find ourselves. Digitizing music pedagogy has enhanced learning efficiency and quality teaching/instruction; hence, teachers of music need to keep abreast with the developments through quality research and trainings. This study seeks to find out the scope of the digital contents in the undergraduate programme of the Department of Music, Nnamdi Azikiwe University, Awka. This is attended to by assessing the programme in the dimension of teaching strategies and the learning outcomes. A questionnaire and participant observation are used. The questionnaire is administered to a sample of sixty (60) students and ten (10) lecturers. The study confirms that there are impressive digital contents in the programme and that students are at home with the contents, being enthusiastic, eager and anxious about learning the entrepreneurial benefits associated with them. However, there are evident problems identified in respect to inadequate instructional techniques, insufficient tools, equipment and instruments among other things. It is therefore recommended that the required instructional tools and materials be provided. The lecturers need

to equip themselves and be equipped to cope with the challenges of this growing trend in music pedagogy.

Keywords: *digital economy, academic programme, methods of instruction, conventional teaching, advanced instruction, music education*

Introduction

The advanced musical instruction with current digital technological nuances is an emerging phenomenon requiring investigative research and concrete interpretation for both the teacher and the taught. Advanced music instruction or what can be termed digital-assisted music teaching is a new teaching method with the application of digital technology to assist music pedagogy. The theory and practice of both the conventional and the digital methods of teaching music present some challenges, problems, advantages, disadvantages, practices and existing knowledge gap yearning for filling. The effectiveness of each method depends largely on the knowledge, application, and the actual musical outcomes. There is an emotional communication about music, which is why it can elicit such emotions as pleasure, excitement, sadness, etc. Music education cultivates imagination and creativity. Students' ability in music appreciation should be cultivated as well. To expand the field of music, we can also combine listening practice to develop students' ability to enjoy music (Jia and Zhang 2021; Wang, Zhai, and Liu, 2022).

Digitalization cuts across all facets of human life and development as it stands today. Music as an art, music teaching and learning, music products and consumption all happen to be affected by digitization. There are strong technology-driven transformation of the music sector. The music industry was the first

media sector to be confronted with digitization- and initially benefited massively from it (Dolata, 2020). The technical innovations are evident, from the sale of physical audio media like cassettes, CDs, to internet downloads to music streaming. The evolutions in music exchange and consumption has got to the media platform – YouTube. YouTube, which generates its revenue almost exclusively through advertising, emerged as a legal, freely usable and strongly frequented offer that made compilation, exchange and nearly unlimited search and listening to music on the internet largely free of restrictions (Burgess and Green 2018). The technological development in music industry still gave rise to commercial music streaming which transits from purchasing music to paid access to music. The purchase of music has declined sharply, being increasingly replaced by subscription and advertising financed access to music via platforms such as Spotify (Dolata, 2020). Music business has changed. Music is no longer distributed through systems controlled by major stores but through internet retailers and cloud-based streaming portals.

In addition, not only the paid access to music but also the possibilities of listening to, discovering, recommending and exchanging music without paying for it has expanded and differentiated greatly over the past two decades – initially primarily due to the emergence of subversive music, file-sharing networks on the internet and today mainly through media platforms such as YouTube or social networks like Facebook (Burkart 2014, Burgess and Green 2018, Nicholson 2019). The digital change and development in the music industry sure has its attendant issues but the transformations have equally experiences some restrictions by surveillance and control over the unbounded and seemingly open listening experience that streaming platforms offer to consumers. The loss of control that had attained alarming proportions for the

music industry, especially in the phase of anonymous and unrestricted file sharing via Person to Person (P2P) networks, has been more than compensated for by commercial streaming platforms with their surveillance, curation and commodification activities (Dolata 2020, Zuboff 2019, Hardy 2014). The music industry by this way finds itself once again in a comfortable and favorable situation.

Research method

Considering the nature of the research being descriptive in nature, a survey research design was chosen for this study. Ali (1996) defined survey research as a descriptive study which seeks to document and describe what exists or present status of existence or absence of what is being investigated. In other words, “only a part of the population is studied, and findings from this are expected to be generalized to the entire population” (Nworgu, 1991:68). Efforts were made to ensure that the results were uncontaminated, unbiased and pure from their natural settings without experimental manipulations. The instrument used was a structured questionnaire. The total number of respondents were sixty students from music students from Nnamdi Azikiwe University, Awka.

Chi square (χ^2) and simple percentages were applied in the study. There were five alternative responses as provided in the questionnaire for categorizing the opinion of the students' responses against each item as applicable. It was against that background that χ^2 test was applied to test whether or not a significant difference existed between the observed and expected frequencies (number of responses) falling independently into the five categories against each test item. Thus, wherever the categorical distributions of the responses were found significant,

the category which pooled greatest number of responses was used as an indicator for predicting the category of randomly sampled opinion which could be applied inferentially to the population.

The formula for applying the χ^2 test is as follows:

$$\chi^2 = \sum \frac{(F_o - F_e)^2}{F_e}$$

Where: F_o = the observed number of responses in a given category.

F_e = the expected number of responses in that category.

\sum = directs to sum this ratio over all the categories.

Having 60 student respondents and 5 response categories, F_e in each category is $\frac{60}{5} = 12$. The degree of freedom (df) considering the five categories is 3 while the level of significance (α) is taken to be 0.05. With the above information, the critical value of χ^2 shows that a value of 7.815 or more is required for significance to occur. Thus, where the χ^2 of a given distribution of the responses was found significant, it was interpreted that the distribution did not occur by chance. Besides, there was also a supplementary application of percentage analysis of number of responses in each category with a view to quantifying and ranking the polled number of responses. Thus, because of the directional nature of all the items in the question, the investigators were not only interested in finding out whether the test item is significant or not. They were also interested in finding the direction in which the significant difference is tilting towards (i.e. whether it was positively affecting or negatively affecting), by taking percentage bearing of each test item.

With a view towards determining the integration of digital contents in the existing curriculum, the study x-rayed both the core

and elective courses to determine the courses with digital elements in their contents.

Results and discussion

The results of the respondents to the questionnaire are presented in Table 1.

Table 1: Responses of Factors Affecting Digitization of Teaching Music ($F_e = 12$, $\chi^2_* = 7.815$)

S/N	ITEM	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
1	There are digital contents in many of my courses of study	9	18	7	13	13	6.000	Insignificant
		(15.0)	(30.0)	(11.7)	(21.7)	(21.67)		
2	I prefer conventional methods and contents of teaching to digital methods	11	10	13	23	3	17.333	Positively Affecting
		(18.3)	(16.7)	(21.7)	(38.3)	(5.0)		

S/ N	ITEM	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
3	My teachers apply digital methods in their teaching	0	13	10	27	10	31.500	Negatively Affecting
		(0.0)	(21.7)	(16.7)	(45.0)	(16.7)		
4	There are sufficient musical instruments in the department	5	12	4	26	13	25.833	Negatively Affecting
		(8.3)	(20.0)	(6.7)	(43.3)	(21.7)		

S/ N	ITEM	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
6	Audio-visual equipment is employed as teaching tools where necessary	5	11	10	22	12	12.833	Negatively Affecting
		(8.3)	(18.3)	(16.7)	(36.7)	(20.0)		
7	Television set, CD player, visual musical CDs are employed for instructions where necessary	0	10	6	19	25	33.500	Negatively Affecting
		(0.0)	(16.7)	(10.0)	(31.7)	(41.7)		

S/ N	ITEM	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
8	My musical skills and creativity are enhanced through digital media instructions	22	16	0	17	5	27.833	Positively Affecting
		(36.7)	(26.7)	(0.0)	(28.3)	(8.33)		
9	By my own judgment, the teachers have adequate knowledge of digital means of instruction	6	21	15	13	5	14.667	Positively Affecting
		(10.0)	(35.0)	(25.0)	(21.7)	(8.3)		
10	My teachers are knowledgeable in digital method of teaching	5	17	16	16	6	11.833	Positively Affecting
		(8.3)	(28.3)	(26.7)	(26.7)	(10.0)		

S/N	ITEM	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
11	A good number of the courses are digital based	10	18	7	13	12	5.500	Insignificant
		(16.7)	(30.0)	(11.7)	(21.7)	(20.0)		
12	Competence on the part of the teacher as it concerns digital instruction is quite commendable	9	16	16	13	6	6.500	Insignificant
		(15.0)	(26.7)	(26.7)	(21.7)	(10.00)		
13	There is adequate provision of digital media equipment in my department	3	4	4	23	26	43.833	Negatively Affecting
		(5.0)	(6.7)	(6.7)	(38.3)	(43.3)		

S/ N	ITEM	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
14	Inadequate supply of digital materials for instruction to a large extent negatively affects students' learning	23	21	4	10	2	30.833	Positively Affecting
		(38.3)	(35.0)	(6.7)	(16.7)	(3.3)		
15	Digital instructional equipment is not quite necessary for instruction	0	5	6	23	26	45.500	Negatively Affecting
		(0.0)	(8.3)	(10.0)	(38.3)	(43.3)		
16	Students are encouraged by the teachers to scout for digital materials	11	29	5	9	6	32.000	Positively Affecting
		(18.3)	(48.3)	(8.3)	(15.0)	(10.0)		

S/ N	I T E M	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
	Use of digital methods makes for faster learning and better understanding than the conventional methods	(38.3)	(50.0)	(5.0)	(1.7)	(5.0)		

S/N	ITEM	SA (%)	A (%)	U (%)	D (%)	SD (%)	χ^2	Decision
19	I am encouraged as a student to contribute to learning experience	32	25	1	1	1	77.667	Positively Affecting
		(53.3)	(41.7)	(1.7)	(1.7)	(1.67)		
20	I am knowledgeable in the modern digital streaming of music products	20	18	3	13	6	18.167	Positively Affecting
		(33.3)	(30.0)	(5.0)	(21.7)	(10.0)		

In each of the frequency distributions corresponding to each of the 20 test items in Table 1, the differences in the opinions expressed by the respondents was significant in 17 out of the 20 test items from this study. In ranked order of relative significance of the test items are items 2, 4, 3, 1 and 5. On a closer reasoning of the contents of the test items in line with the majority opinion of the respondents, it was observed that while 10 test items where in the positive direction, 7 test items where in the negative direction, as depicted in figure1. The test items 3, 4, 5, 6, 7, and 13 that are

in negative direction are so because the classrooms are not digitally equipped. Therefore, even when the teachers know what to teach or how to teach certain things, they are handicapped in carrying such out. Well, the researchers make bold to point out that the Nnamdi Azikiwe University through the present administration has provided the Music Department with much equipment, instruments, gadgets etc.(which are still packed in the University store due to lack of space) that will significantly help in music teaching and learning in this digital era. Again, the University is currently building a Department of Music (nearing completion) of world class standard that will be thoroughly equipped to answer a first-class music department beyond Nigeria and Africa. Many thanks to the University administration through its project 200 Vision that will see music and music department of Nnamdi Azikiwe University in an enviable light.

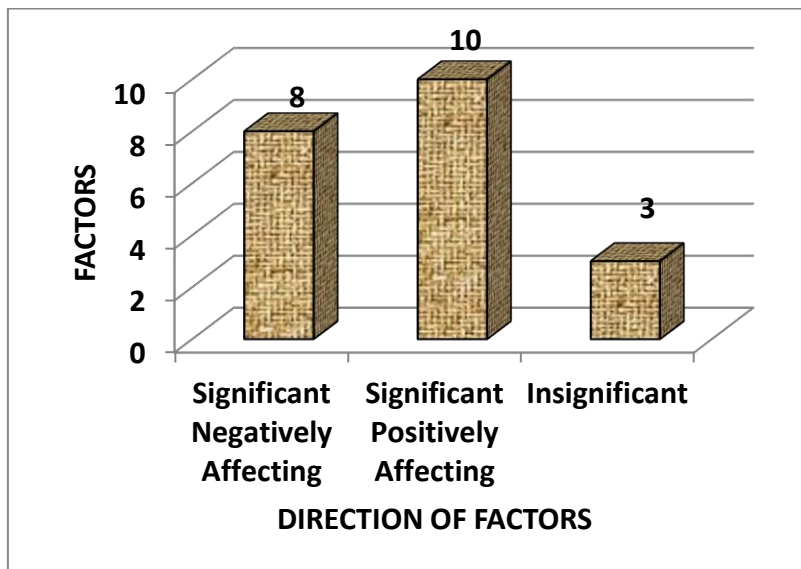


Figure 1: Directional results of the test items

It was noted from the results of the students' response as regards the test items 1 and 11 are insignificant, showing that they are not sure whether there are enough digital contents on the courses they are studying. Hence, this study carried out a document to determine those courses with digital contents and the results are shown in Table 2 and Figure 2

Table 2: Undergraduate core courses with digital elements in the course contents

Year (Level)	Fraction with digital elements	Course
Year One	5/21	MUS 132 African Music Studies, MUS 114 Aural Training & Musicianship Studies II, MUS 144 Individual Performance Studies II, MUS 145 Ensemble Studies I, MUS 146 Ensemble Studies II
Year Two	11/19	MUS 213 Aural Training & Musicianship III, MUS 221 Western Music History: Renaissance (1400 - 1600 to Baroque 1600 - 1750), MUS 231 Nigerian Art and Popular Music, MUS 241 Keyboard Studies III, MUS 243 Individual Performance Studies III (IPS III), MUS 245 Ensemble Studies III, MUS 200 Introduction to Musical Acoustics, MUS 214 Aural Training & Musicianship Studies IV, MUS 222 Western Music History: Classical (1750 - 1800 to Romantic Period (1800 - 1900), MUS 244 Individual Performance Studies IV

		(IPS IV), MUS 246 Ensemble Studies IV,
Year Three	10/17	MUS 301 Introduction to Music Technology, MUS 311 Counterpoint and Further Harmony I, MUS 313 Orchestration, MUS 321 Western Music History: Period of Impressionism to 20 th Cent. & 21 st Cent. (1880-1980 to Modern Times), MUS 331 Music of World Cultures, 343 Individual Performance Studies V (IPS V), 345 Ensemble Studies V, MUS 332 African Music Studies, MUS 342 Contemporary Music Styles Performance Practices, MUS 344 Individual Performance Studies VI
Year Four	9/11	MUS 432 African Music Advanced Topics, MUS 443 Individual Performance Studies (IPS VII), MUS 444 Individual Performance Studies VIII (IPS VIII), MUS 445 Ensemble Studies VII, MUS 446 Ensemble Studies VIII, MUS 481 School Music Methods, MUS 489 Research Methods and Procedures II, MUS 451 Stress Area Studies I (Project), MUS 452 Stress Area Studies II (Project).

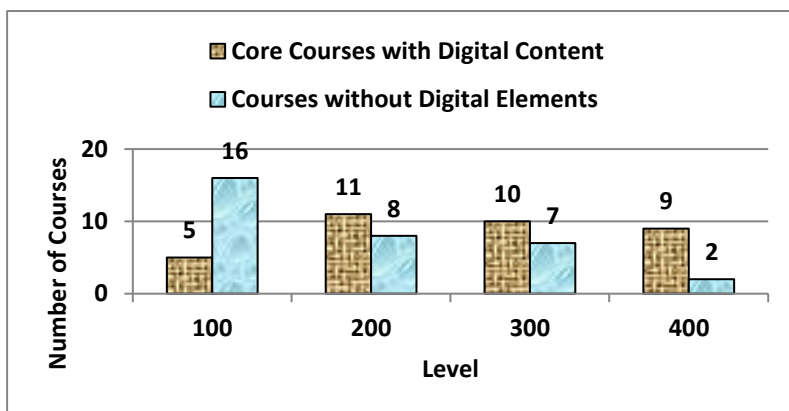


Figure 2: Number of core courses with and without digital contents

The students only take elective courses at their 300 and 400 levels. At each of the levels they take 4 courses, making it a total of 8 elective courses a student takes before graduation. The extent of digital content for each student depends on the area of specialization and the choice of course chosen by the students.

Digital music teaching

Majority of the opinions of the respondents preferred digital teaching to conventional teaching as depicted in test item 2. However, in test item 3, 45% of the students which polled the highest value disagreed that the teachers apply digital methods in their teaching. Hence, this pertinent question, are there ways to digitally assist music teaching in the university? The digital-assisted music teaching should train the personality of the students to culturally communicate with music so as to participate in social activities and be relevant to the society. Music plays significant role in moral education. Music education is a developmental tool

to making the society and the social life worthwhile. It is equally a vital part of comprehensive quality education. As Weisheng and Hui (2022) put it “It has been proved that music education plays an important role in broadening students’ vision, cultivating their ability of innovation, improving their aesthetic ability, cultivating their good moral sentiment, improving their overall quality, and promoting their all-round development”. Teachers should not only be satisfied with music education in the classroom but also the overall music development and aesthetic ability of the students.

Digitally assisted music teaching being a method of teaching has emerging discourse both in the theoretical system and practice. It then becomes necessary for music teachers to delve into in-depth research to match the new trend and thereby improve the efficiency and quality of the teaching of music.

Method of instruction/teaching

Instruction methods are the various ways through which opportunities are provided for learners to effectively and maximally benefit from educational programme as mapped out in the curriculum or course of study. It is a system of methods and principles for teaching. There are different modes of teaching which are traditional or conventional in nature, they include: Team teaching, Individualized instruction, grouping, programmed instruction, flexible scheduling, independent study etc. A close look at the teaching methods shows that they all apply to music teaching as well even in the Department.

- ✓ Team teaching: This is a form of instruction in which arrangement is made among two or more teachers who plan, instruct and evaluate students, equivalent in size to conventional classes taking advantage of the (the teachers’)

respective competencies. This method of teaching is used in teaching many courses in the department.

- ✓ Individualized instruction: Individualized instruction is a method designed to give individual guidance, attention, and assistance to the learners as individuals taking into considerations their differences and peculiarities. This type of instruction is perfectly applied in Individual performance study courses (IPS) and Stress Area Studies (Project)
- ✓ Grouping: This is a method where learners are grouped based on some principles like age, mental abilities, subject interest, performances, even physical appearance. The grouping can be a large group or a small group. The groupings can be homogeneous (same kind), or heterogeneous (mixed kind) in composition or disposition. Grouping as a method of instruction is well employed in Ensemble studies and they are heterogeneous in nature. This is a kind of collaborative learning in small groups and it has been a prevalent method of music pedagogy.
- ✓ Programmed instruction: Programmed instruction is a mode of instruction where learning is brought about through the use of materials and experiences carefully designed into modules or units which are predetermined. As a matter of fact, many courses are programmed from year one through to year three or final year.
- ✓ Flexible scheduling: This is a situation where there is varied time scheduling for teaching. School system traditionally has fixed schedule or times for engaging in school activities but flexible scheduling allows the teacher or school management to handle class or other school activities as situations permit. Flexible scheduling is also a teaching method used in the

department as lectures can hold outside of the scheduled time in the time table.

- ✓ Independent study: Learners are conventionally confined to school schedules as they stay in school. Even though they are scheduled into different group activities in classes, quizzes, examinations etc., they still need to be given the opportunity to do things and learn in their own ways. In independent study, learners explore their creativity and develop their individual special interest and talents. This type of instruction does not only pertain to traditional/conventional method, it is also applicable to digital learning in that opportunities are created for the students to discover themselves in music, availing themselves the exploration of the many developments in digital music world.
- ✓ Digital teaching/learning: Digital technologies have significantly changed the way that music is taught or learnt. The use of digital devices like iPad, iPhone, Android device, digital software etc. has brought revolution to music teaching, learning, music making and music sharing. Digital media enables students to learn on their own or in small collaborative groups, helping them in composing, rehearsing, performing, critically evaluating, and listening to music, and it is indeed what is happening – if not generally in music classrooms where the traditionalist model of teacher-directed, rote teaching-to-learn strategies prevail (Gouzouasis & Bakan, 2011). Some examples of digital music pedagogy are shown in figure 1.



Fig. 1: Pictorial examples of digital music pedagogy

The role of the teacher in music education

Teachers give guide to students in learning activities. Music as a discipline should be more practical oriented than theoretically inclined, therefore the teachers should take note to map out comprehensive evaluation guide to monitor the students' learning progress (Ugoo-Okonkwo et al, 2022). There is need for reconsideration of the methods employed in preparing and educating music learners because the limitations that teachers have in their own orientations may be one of the major factors preventing the music profession from adapting and adopting digital media into their own teaching and learning experiences. Many

teachers seem to be very comfortable in their own knowledge foundation and experiences and so are not willing to adopt new ideas. Instead of becoming innovators, teachers prefer to repeat or replicate their own learning experiences in their practice (Gouzouasis and Bakan, 2011).

Teachers should as much as possible create interactive music classroom where students are free to participate fully thereby contributing to their progress in learning (Ugoo-Okonkwo 2014a). Teachers should create a conducive learning atmosphere for efficiency in learning. In advanced music education in the digital economy, teachers should use modern tools in teaching, such as multimedia. The modern teaching tools should be employed to show music knowledge to students, deepen their impression, excite their interest in music, enhance their understanding, and develop their music potentiality. Failure to fully combine the actual situation of students to be taught is contrary to the creativity of music discipline itself. According to Teachout (2014),

In terms of teaching methods and teaching forms, students' participation is ignored teachers' teaching is emphasized, knowledge and skills are emphasized, pleasure process is ignored, and teaching results are emphasized. This kind of teaching mode with professional tendency is not conducive to the realization of the self-value and teaching objectives of general music curriculum.

Students are endowed with different musical talents and abilities which need to be encouraged and enhanced for proper development and usage (Ugoo-Okonkwo, 2014b). Students have

their innovative thinking and initiatives which can be optimized by the teachers. Vermillion, (2019) in his submission asserts that:

Teachers should optimize teaching methods, learn to give the classroom to students, guide students to actively divergent thinking, pay attention to the development of students' interests, actively guide students to explore music learning, inspire students' thinking activeness, create an interactive classroom between teachers and students, teachers should learn to make friends with students, pay attention to listening to students' suggestions, and improve teaching methods; thus, mutual promote and make progress with each other to lay the foundation for the cultivation of innovation ability.

Students should explore their independent ability, study enthusiasm, thinking ability, aesthetic ability, innovative ability, et cetera; they should not surrender their entire dependence to the teacher. Students should be given proper encouragement and positive guidance.

From observation, teachers make use of multimedia gadgets where applicable as teaching aid even though it was not in all cases as should because the classrooms were not equipped for such instruction delivery. The courses that had anything to do with studio work and or recording were taught well as the students were taken to the music studio in the Department for a hands-on instruction and experimentation. In some cases, the students were required to record their music in the studio and produce a finished work of those. In Digital Instrument Technology courses, the

students were taught concretely using the equipment in the studio. Depending on the course contents, students were also taught to start and finish music recordings manipulating the recording equipment and completely manning the process and finally coming out with finished products.

Beyond the availability and use of the music studio in the Department, students were also taken on tour of music studios in town for some comparative and or more expanded teaching where some equipment /appliances are lacking.

Conclusion

Some gaps do exist between theory and practice. There are diverse advantages and disadvantages accompanying the conventional as well as the modern/advanced/digital modes of musical instruction. For effectiveness of instruction and learning, there ought to be conscious exploration of the emergent technological advancement in music both by the teachers in their teaching methods and methodology and the students, in their acquisition of learning and learning outcomes. There is need for music teachers to have a rethink of their approaches to teaching and learning in digital economy. Conventional teaching methods need to be combined with digital methods for broader learning experiences. In employing any music teaching method, students' participation should not be ignored while laying emphasis on the teacher. There is need for the optimization of the teaching process which should give students room to actively participate in teaching and learning process where their interest is guided. Teachers should step up their knowledge development as new knowledge emerges. There is need for them to improve their knowledge system and embrace recent digital development in music education.

Teachers should therefore do everything in their ability to keep up with the changes with the technologically-advanced cultures in making use of new technologies for music teaching, music learning, and music making.

For better musical instructions, the musical classrooms need to be well equipped with adequate instruments, equipment and tools that will help in exploring the digital world of music that we are in. Consideration has to be given to youths who are the students in Higher Institutions of learning with regards to their type of music learning and music making (Cavicchi, 2009; Green, 2002; Regelski, 2007; Kratus, 2011). The choice of music as teaching aid is helpful for active students' participation in class. Students can also be allowed to bring their own song/music collection to class where the class (both teacher and students) will discuss and analyze the make-up: melody, harmony, rhythm, etc.

Familiar songs can easily create pleasant, relaxed and friendly atmosphere for learning therefore, teachers can have collections of songs and music that are very popular among the students who happen to be youths as instructional materials. When teaching music, according to the content of the works, teachers should guide the students to start from melody, rhythm, style, and other aspects, while firmly mastering the basic knowledge of music, using the old knowledge to analyze works, such as phrases, tunes, works style, and so on, so as to improve students' understanding ability, Hofer(2005).

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