MUSIC TECHNOLOGY: A TOOL FOR MUSICOLOGIST IN THE MUSIC INDUSTRY

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Abstract

This paper focuses on the appraisal of music technology as a tool for musicologist in the music industry. It further reviewed the scholarly articles, which revealed the significance and function of music technology in music as a discipline. Sampling and analytical method was employed in this research. From this research, it was evident that music technology had greatly tooled and tuned music by enhancing musicologists' effort in every performance and gadget usage in the music industry. Yet, I strongly recommend that this concept of music technology should be imbibed by all and sundry to maintain and sustain their relevance in the music discipline, especially in this contemporary age.

Keywords: Technology, Music industry, Musicologist

Introduction

The vast range of virtuosity expressed by musicologists is not baseless. This is owing to the availability of the qualitative tool, equipment, devices and gadgets which makes up a system that is responsible for the production of a beautiful music, and the diligence put in by musicologists to develop their skills in the effective usage of their various instruments and gadgets. The latter is a major determinant of a good music, but the former is the emphasis of this paper. Having being informed on how important musical instruments and gadgets are in the appraisal of the musicologists' proficiency in their various fields, it is worthy to note that these instruments and gadgets are great tools to musicologists.

It is definitely possible to make music without the inclusion or usage of any musical instrument or gadgets—a genre or form of music;it might meet the taste of some, or be required for some special purposes. But, music making as a concept can either be vocal (pure or with accompaniment) or instrumental. However, these instruments and gadgets cannot be utilized unless they are carved, produced, or manufactured as the case may be.

Music technology is an innovation of great scientists who have deemed it fit to think about several ways of enhancing music and the efforts of musicologists in various fields. These innovations have been progressive in nature. The development of science and technology brings about the changes in technology. While the emergingtechnology brings changes to our life and work, it also impacts the traditional industry, including music production.

The past century has witnessed a number of technological changes which resulted in far-reaching consequences for all realms of musical practice. In the context of music production, the processes of phono-graphy, electrification, digitalization, and interconnectedness gave rise to a huge number of new musicalinstruments which differ significantly from those known previously. The usage of recorded sounds, the synthesis of sounds that are physically irreproducible, playing instruments that are purely virtual, or having instruments communicate among each other via a network, identify milestones in the history of musical instruments. Yet, at the same time, they blur the boundaries between something we are prone to call 'instrument' and other categories such as 'medium', 'system', 'configuration', 'machine'.

Literature Review

Music

Music, which is an artisticexpression, in one guise or another, permeates every human society. This implies that no culture is void of the influence of music in its traditional and cultural norms. But the prevalence of music is nothing new, and its human importance has often been acknowledged. Musical instrument is any device used for producing a musical sound.

Music cannot be defined in a single statement. There are different standpoints from which the term 'music' can be viewed, several scholars posit several opinions about Music. Music is generally defined as the art of arranging sound

to create some combination of form, harmony, melody, rhythm or otherwise expressive content (Online Etymology Dictionary). Cambridge dictionary defined music as a pattern of sounds made by musical instruments, voices, or computers, or a combination of these, intended to give pleasure to people listening to it. Epperson (2022) further defines music as an art concerned with combining vocal or instrumental sounds for beauty of form or emotional expression, usually according to cultural standards of rhythm, melody, and, in most Western music, harmony.

Music in a general context is therefore making melodic, rhythmic, harmonic sound with the combination of vocals or instrumentals sounds or both to appeal to a specific audience. Music can therefore be categorized broadly into two; sacred and secular—while the former is used for religious and worship purposes in respect to a deity, the latter is predicated upon several themes as it ranges from feelings to politics, to educational, to entertainment and other purposes. All of these might come in different genres such as; popular, reggae 'n' blues, jazz, afrobeat, etc. But, it is imperative to note that for whatever purpose it might be used for, once there is a combination of instrumental or vocal sounds or both, it is the art of music making.

Technology

Past studies have shown that defining the concept of technology is not easy (Reddy and Zhao, 1990); therefore, technology has been defined from different perspectives. As a result, numerous definitions of technology have been provided by earlier literature. Technology, in the opinion of Kumar et al. (1999), has two main parts: 1) a physical element made up of objects like products; 2) The informational component, which consists of tools, equipment, designs, procedures, and processes. expertise in functional fields such as skilled labor, management, marketing, production, quality control, and reliability.

By scrutinizing the technology definition, there are two basiccomponents that can be identified: 1) 'knowledge' or technique; and 2) 'doing things'. Technology is alwaysconnected with obtaining certain result, resolving certain problems, completing certain tasks using particular skills,employing knowledge and exploiting assets (Lan and Young, 1996). Burgelman et al. (1996) refer technology as the theoretical and practical knowledge, skills, and artifacts that can be used to develop products and services as well as their production and delivery systems.Technology is also embodied in people, materials, cognitive and physical processes, facilities, machines and tools (Lin, 2003).

In its most basic form, technology refers to produced items such as tools (axes, arrowheads, and modern replacements) and containers (pots, water reservoirs, buildings). They either serve to improve human abilities (with a hammer, for instance, you can exert a bigger force on an object) or to make it possible for humans to carry out tasks that they would not otherwise be able to (with a pot you can transport larger amounts of water; with your hands you cannot). Engineers refer to these things as "hardware." In anthropology, "artifacts" are used.

However, technology doesn't stop there. It is necessary to create artifacts. They require invention, design, and production. This calls for a more complex system that includes "software," factor inputs (such as labor, energy, raw materials, and capital), and hardware (such as machinery or a manufacturing facility) (know-how, human knowledge and skills). The latter, which the French refer to as technique, stands for the knowledge basis and immaterial aspect of technology. As a result, technology encompasses both the materials used and the manufacturing processes.

Furthermore, the creation and utilization of artifacts both require knowledge or method. To operate a bank account or drive a car, you need knowledge. Knowledge is required on all scales, including the individual, complex organizations, and societal levels. A typewriter is merely a bulky, useless piece of machinery without a user who can type, let alone read.

The "software" necessary to create and utilize technological hardware varies in size and complexity. Both are interconnected and necessitate surroundings that are both concrete and abstract, such as social systems and physical structures. Institutions, such as governments, businesses, and markets, as well as social norms and attitudes, play a significant role in how systems for creating and utilizing artifacts arise and operate. They determine the origins of specific objects and artifact combinations, which ones are rejected or succeed, and, if successful, how soon they are assimilated into the economy and society. Technology diffusion is the term used to describe the final step.

Technological hardware varies in size and complexity, as does the "software" required to produce and use hardware. The two are interrelated and require both tangible and intangible settings in the form of spatial structures and social organizations. Institutions, including governments, firms, and markets, and social norms and attitudes, are especially important in determining how systems for producing and using artifacts emerge and function. They determine how particular artifacts and combinations of artifacts originate, which ones are rejected or which ones become successful, and, if successful, how quickly they are incorporated in the economy and the society. The latter step is referred to as technology diffusion.

The reason technology is much more emphasized in this paper is that, it is a general phenomenon. Music which have been practiced and performed since the medieval era, although, at first without music instruments still experienced great development during that time as a result of the increase in the level of technology. And up on till recent times and beyond, technology cannot be shelved.

Music Technology

As regards music technology, musical instrumentstie the concept of instrument to the concept of music in a generalway, and not explicitly to musical activity. Hornbostel's statement, "...For purposes of research everything must count as a musical instrument with which sound may be purposely created," is one of the most often used definitions (Hornbostel, 1933).Lysloff and Matson (1985)defines music technology as any device or human behavior constructed or carried out for the primary purpose of producing sound, whether musical or otherwise.In contrast to Hornbostel, Lysloff and Matson tie the intentionality to the construction rather than to the actual or potential use of the device.

As a general rule, the most important requirement of an instrument for a professional performer is that the instrument demonstrates for the audience that the performer is necessary and is in fact controlling the music; and this requirement assumes a strong degree of determinism at least in certain aspects of the instrument's behavior (Chadabe, 2002).

Technology in music making can thus be classified intofive aspects, which are:

- the physical aspects of sound and sound representation;
- audio hardware, digital audio data, and computer-based recording, editing, processing, and mixing;
- MIDI hardware, MIDI messages, and MIDI sequencing;
- electronic sound production using sampling and synthesis;
- and computer notation and computer-assisted instruction (the computer hardware and software concepts necessary for music technology)

Sound Production

Sound production (engineering) is increasingly seen as a creative profession where musical instruments and technology are used to produce sound for film, radio, television, music and video games. Audio engineers also set up, sound check and do live sound mixing using a mixing console and a sound reinforcement system for music concerts, theatre, sports games and corporate events.

Alternatively, audio engineer can refer to a scientist or professional engineer who holds an engineering degree and who designs, develops and builds audio or musical technology working under terms such as acoustical engineering, electronic/electrical engineering or (musical) signal processing.

Aforetime, there was nothing to enhance music and its performance. In the art of music making, technology started from mechanized or manual techniques and advanced to digital technology. For instance, before sound propagation devices came up, people with loud voices are usually engaged in communicating to a very large audience. Thereafter, some large-coiled and ribbon microphones came up; and afterwards advanced to dynamic and fibre-optic microphones. Music writing, notation and scoring is another aspect of music making which has experienced a great transformation from the medieval up on till the 21st century or contemporary age. A profound instance which is worthy to note is in the art of sound recording and production, the mechanized gadget used decades back was phonograph (gramophone) which recorded and played sound in ananalog way using a circular large disc. Recently, it has developed to studio gadgets and turntables. Creating music with a perfect fusion of modern technology and the new music creation way have more advantagesrelative to the traditional way of music creation. So, the evolvement of technology in the art of music making cannot be overemphasized.

Methodology

This research employed the sampling and analyticmethods in the collection and analysis of data. The primary data used for this research is sourced from journals and scholars' articles. It experimented the construction of a 3-way passive loudspeaker as a significant tool in the art of sound production.

The materials used in the process of construction are:¾`` plywood, Speaker cone (diaphragm), tweeter, crossover, handle, corner edge, screws, nails, net, rug, foot stand, white glue, evo-stik Glue, connection cable.

Conclusions and Recommendations

The findings of this study revealed the great and indisputablesignificance of technology as a worthy tool in the art of music making, which is a propels the production of musical instruments, and which in turn is engaged to enhance the musical performance, skills and effort of musicologists in all aspects of the Music industry.

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