The Relevance of University Music Curricula to the Requirements of Music Production Job Market in Kenya.

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ABSTRACT:

Music production is one of the job markets that has gained popularity around the world, including Kenya. Universities have come up with music production programmes in order to prepare bachelor of music learners for this viable music job market opportunity. However, it is the observation of many studies that universities are not preparing job-ready graduates. With the advance of the digital era that is seamlessly permeating every sector of the music job market, attention needs to be given to the music production programs in Kenya. This study purposed to establish the relevance of university music curricula to the requirements of music production job markets in Kenya. Elliot's (2005) praxial theory underpinned the study. The results revealed that music production curriculum of university X did not meet most of the job market requirements while that of Y met most of the requirements. The Simple Matching Coefficient (SMC) of university X was 0.59 while that for university Y was 1.00. This finding revealed that the music production university music curricula could not be entirely termed as 'irrelevant', but it depended on individual universities. The recommendation was that university music schools should revise and restructure their music curricula to accurately reflect the music production job market in Kenya to compete favourably, locally and internationally.

Key Terms: University music curricula, relevance, music production, requirements, music job market.

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INTRODUCTION

The discourse on the quality of university education and its relevance to the requirements of emerging job markets has attracted the attention of scholars worldwide. Taulson and Hepworth-Sawyer (2018, p. 22) observe that music, as a field, is interconnected with numerous music market outlets that include “radio, film, media, TV and gaming, and virtual reality industries” which depend on produced music. According to Mawusi and Kwadwo (2020), the significance of computer technology in music education in higher education cannot be understated. It is the role of universities that offer music production programmes to come up with curricula that are connected to the requirements of these music job markets. In this respect, music production courses should “...generate autonomous learners who are equipped with the skills for employment or freelance career in fields related to music production (or as producer artists)” (Taulson, & Hepworth-Sawyer, 2018, p. 23).

In the music education context, the narrative on university music curricula and its relevance to the job market continues to grow among researchers. The current study is concerned with whether university music curricula are tracking the knowledge and skills that are required by employers in the music production job market in Kenya. Currently, the local and global music economy is rapidly growing hence initiating major changes and demands in the workplace in Kenya. This necessitates a flexible and responsive curriculum that equips employable learners with relevant skills (UNESCO, 2018). The

conventional curriculum development model requires that a needs assessment be undertaken by given training institutions to “capture the expectations of the stakeholders and develop a curriculum for its academic programs” (Riechi, 2010, p. 11). This premise authenticates the need to establish the relevance of university music curricula to the requirements of the music production job market in Kenya.

LITERATURE REVIEW

Music production is a diverse and thriving job market globally. The music producers play a key role in the recording process. Some of the functions of a music producer are: leading, offering consultation services of observing and advising, initiating creative ideas and determining the outcome of the product (Colquhoun, 2018). Wiederkehr (2015) describes a music producer as follows:

The producer is, essentially, an individual who looks for the intention of a song or Composition, and pinpoints what elements make that musical work special, unique, or significant. Then, using the tools of arranging, orchestrating, mixing, and compositional techniques, the producer, brings out these significant elements in the most effective way he or she can. (Wiederkehr, 2015, p. 6). Wiederkehr’s description of a music producer guides this study in identifying key production skills which bachelor of music graduates may require as prerequisites to their employment.

Concerning 'soft' skills, Burgess (2013) posits that interpersonal skills cannot be learnt from a book or course without internship or apprenticeship which provide real-life experience. However, Burgess (2013,

p. 29) acknowledges that "... combined with a proactive DIY approach, a good school program can fill in knowledge gaps and instil a deeper understanding of the fundamentals while increasing awareness of best practices." DIY, in this case, means Do It Yourself where a learner has hands-on experience in learning. Burgess (2013) observes that music educational institutions can produce knowledgeable and skilled graduates that are well versed in technology and business of audio production. Nevertheless, Burgess (2013, p. 30) maintains that it is difficult to impart "audio etiquette and the subtle interpersonal techniques that producers and engineers acquire from experience" in educational institutions like the university. This may be true, however, with music job market-sensitive content, experienced instructors, quality resources, and appropriate evaluation, the objective of inculcating 'soft' skills in bachelor of music graduates can be achieved. Therefore, the current study endeavoured to unearth music knowledge and skills from music production job market that provided a basis for relevant content for university music curricula in Kenya.

McNally's (2016) provides an insight into the new pedagogical approaches in sound recording and music production. The study suggests the use of multitrack audio archives, objective audio features, and one new visualization tool. McNally (2016, p.1) acknowledges that due to complexities involved in music production, which overlaps with sound engineering, it takes a prolonged time to acquire and improve on "acuity of technical skills and critical listening". The study identifies ear-training methods as significant in

improving identification, recognition and reproduction of frequencies (equalization), dynamics processing and artificial reverberation. In concurrence with Burgess (2013), McNally (2016) acknowledges that apprenticeship is crucial in learning music production skills. In addition, critique methods are used in developing more complex integrated listening skills such as multitrack recording and mixing. While McNally's (2016) study provides a pedagogical platform that helps in the identification and nurturing of required skills in music production, it is not the main focus of the current study. McNally's (2016) study is mainly hinged on music pedagogy, which is a valid aspect in achieving the required skills in a music learner, while the current study emphasized on required skills in music production.

METHODOLOGY

The study had an objective of establishing the relevance of university music curricula to the requirements of the music production job market in Kenya. The study employed the Validating Quantitative Data Model (VQDM), which is a variant of the Triangulation Design (a type of mixed methods design). The target population was music production managers in Nairobi County, Kenya. University music curricula from two universities, X and Y offering undergraduate music programs in Nairobi County were selected using the census method. The pilot study was conducted using 10 per cent of 191 participants. The response rate for music production managers was 160. Data were collected using structured questionnaires and document analysis checklist. The structured questionnaire comprised of closed-ended and open-ended items. Quantitative

data elicited from the closed-ended questionnaire and document analysis checklist was analyzed using descriptive statistics in terms of frequencies, and percentages, and was presented in tabular form. Qualitative data were analysed using content analysis elicited from open-ended items which were presented in narrative form. Following the validating quantitative data model methodology, the quantitative and qualitative data were analysed separately. The results of the quantitative data were validated by the results of the qualitative data. The mixing of quantitative and qualitative data was done during the interpretation. After merging the data, it was interpreted and inferences were drawn. The role of the qualitative data was mainly to complement the quantitative data and, partly, to elaborate on the quantitative data. After this, the resultant data was compared to the data elicited from the document checklist of university

X and Y to attain the Simple Matching Coefficient. The resultant Simple Matching Coefficient is what determined to what extent each of the university music curriculums (X and Y) was relevant to the music production job market in Kenya.

RESULTS

Analysis of Quantitative Data on Requirements of Music Production Job Market in Kenya

Analysis of Quantitative Data on Requirements of Music Production Job Market in Kenya

The participants were required to read the given items and tick (✓) each of the skills they considered: 1. Non-essential, or 2. Essential, in the music production job market. Table 1 depicts the results of findings on technical skills required in music production job market:

Table 1: Technical Skills Required in the Music Production Job Market

Technical Skills	Response			
	Non-essential		Essential	
	F	%	F	%
Recording skills	0	0	160	100
Sound reinforcementskills	0	0	160	100
Mixing of sound skills	0	0	160	100
Editing of the recording	0	0	160	100
Handling analogue records	15	9.4	145	90.6
Handling digital records	0	0	160	100
Balancing of individual recorded tracks skills	0	0	160	100
Blending of music sounds skills	0	0	160	100
Adding sound effects skills	0	0	160	100
Adding instrumental parts to voice	0	0	160	100
Single and multi-track recording skills	0	0	160	100

Detecting sound changes skills	0	0	160	100
Mastering skills	0	0	160	100
Information literacy and ICT skills	39	24.4	121	75.6
Music theory skills (reading and writing music)	20	12.5	140	87.5
Music performance (vocal and instrumental) skills	23	14.4	137	85.6
Music conducting skills	16	10	144	90
Music scoring skills	19	11.9	141	88.1
Music appreciation skills	0	0	160	100
Knowledge of different types of music	0	0	160	100
Music composition skills	25	15.6	135	84.4
Music improvisation skills (both vocal and instrumental)	11	6.9	149	93.1

Results in Table 1 show that music production managers had varied responses in their requirements of technical skills in music production. It is evident that recording skills, sound reinforcement skills, mixing of sound skills, editing of the recording, handling digital records, balancing of individual recorded tracks, blending of music, blending of music sounds skills, adding sound effects skills, adding instrumental parts to voice, single and multi-track recording skills, detecting sound changes skills, mastering skills, music appreciation skills, and knowledge of different types of music were regarded as essential skills with each taking a score of 160(100%).

The other skills were rated as either non-essential or essential but with a higher percentage on essential skills are as follows: music improvisation skills (both vocal and instrumental) 11(6.9%) and 149(93.1%), handling analogue records 15(9.4%) and 145(90.6%), music conducting skills 16(10%) and 144(90%), music scoring skills 19(11.9%) and 141(88.1%), music theory skills (reading and writing music) 20(12.5%) and

140(87.5%), music performance (vocal and instrumental) skills 23(14.4%) and 137(85.6%), music composition skills 25(15.6%) and 135(84.4%), and Information literacy and ICT skills 39(24.4%) and 121(75.6%). The responses clearly reveal that all technical skills are highly required in the music production music job market. The higher percentage leans mostly on the 'essential' response while the lower percentage leans on the 'non-essential' response. Technical skills are considered very significant in the music production job market because they enable the music producers to perform their tasks efficiently and effectively.

The qualitative data corroborated the quantitative data on music production technical skills. Most participants stressed the need to train music producers to “deeply understand the function and specifications of every gadget used in music production”. Some of the equipment includes outboard gear processors, DI boxes, pre-amps, sequencer, editing software, Musical Instrument

Digital Interface (MIDI), and Digital Audio Workstation (DAW) that contains plug ins like equalizers, reverbs, multi-effects, limiters, expanders, delays, compressors, musical instruments, and de-essers. Since music producers take care of everything to do with music studios, they are required to train in how to identify and solve problems related to equipment malfunction. It was clear that those who were aspiring to work as music producers should be trained on how to handle and manage music production tools and equipment.

Participants emphatically stated that "technological development is the trigger and designer of the music production industry". This necessitates the identification of new technological advancements and training future music producers in the same. It was considered prudent to encourage trainee producers to "engage in a lot of research in music technology" because "every second seems to birth new electronic gadgets and software". There are a number of digital software that were highlighted by participants that trainee music producers need to be exposed to in order to enhance their techniques of music production, for example, Cubase, ProTools, Ableton Live, and Digital Performer.

Mcnally (2016) acknowledges the complexity of music production training. It requires rigorous training in sound engineering that involves critical listening. To gain acuity in technical skills requires a long period of practice. Ear training is critical in "improving, identification, recognition and reproduction of frequencies (equalization), dynamics processing and artificial reverberation" (Mcnally, 2016, p.1). It is

paramount for a music producer to be exposed to a lot of music to enhance the skills of critical listening to manage the multitrack recording and multitrack mixing. According to McNally (2016) to attain a critical ear, it "...is most often taught using critique or apprenticeship methods, the student either observes a mentor and produces work for critique evaluation, repeating this until they become proficient at the work." Therefore, apprenticeship is inevitable in the training of a music producer.

In concurrence, Amandine (2016) states that due to the extensive responsibilities of music producers, there is a need for multi-skills. In this respect, music production training should be project-based. In this case, learners should be facilitated to access the expertise at given studios during their studies. Amandine (2016), however, observes that music production training is heavily based on technical and theoretical knowledge which is not adequate in assisting the learners master the required skills. In addition, Amandine, Kieran, Toby, and Emmanuelle (2019, p. 16) aver that "...strong editing and artistic direction skills can bring studio owners to succeed despite their limited resources and their near absence of technical education." It is, therefore, very important to let music production trainees have practical experience with the experts. In this way, they will be conversant with music production processes like creativity in composing, planning of the music rehearsals and recording exercise, arranging the different musical ideas and voices, mixing the recording to the required texture, editing the recording, and mastering.

Technological advancement has taken music production a notch higher where "illusion of reality" is highly embraced. This has been feasible due to the invention of virtual technology that enables the current music producers to produce and distribute their products globally within seconds. This finding confirms Vazquez's (2017) observation that music producers are able to compose and produce from the comfort of their homes due to digital technology. This challenges those training in higher institutions to be a step ahead in embracing the new technology in order to assist learners in acquiring necessary skills that would enable them to compete favourably in the music production job market.

Management Skills Required in Music Production Job Market

The participants were required to read the given items and tick (✓) each of the skills they considered: 1. Non-essential, or 2. Essential, in the music production job market. Table 2 depicts the results of findings on management skills required in music production job market:

Table 2: Management Skills Required in the Music Production Job Market

Management Skills	Response			
	Non-essential		Essential	
	F	%	F	%
Verbal and written communication skills	0	0	160	100
Team working and interpersonal skills	0	0	160	100
Networking skills	0	0	160	100

Problem-solving skills	0	0	160	100
Negotiation skills	0	0	160	100
Music industry awareness	03	1.9	157	98.1
Music business skills	0	0	160	100
Time management in recording work	0	0	160	100
Session management skills	0	0	160	100
Leadership skills	0	0	160	100
Legal /copyright skills	17	10.6	143	89.4
Contractual rights and obligations skills	6	3.8	154	96.3
Accounting skills	13	8.1	147	91.9
Marketing skills	0	0	160	100
Customer handling skills	0	0	160	100

The results in table 2 depict that most of the management skills were considered essential in the music production job market. These include verbal and written communication skills 160(100%), team working and interpersonal skills 160(100%), networking skills 160(100%), problem-solving skills 160(100%), negotiation skills 160(100%), music business skills 160(100%), time management in recording work 160(100%), session management skills 160(100%), leadership skills 160(100%), marketing skills 160(100%), and customer handling skills 160(100%).

Although the rest of the management were rated with varying percentages on either 'non-essential' or

‘essential’, the percentage of ‘essential’ was higher as follows: music industry awareness 3(1.9%) or 157(98.1%), contractual rights and obligations skills 6(3.8%) or 154(96.3%), accounting 13(8.1%) or 147(91.9%), and skills legal /copyright skills 17(10.6%) or 143(89.4%). The percentage of the technical skills that were considered non-essential is minimal. Hence, it can be concluded that all the management skills are required in the music production job market.

Music producers need to be trained in "developing a creative mind". Since the music production job market is full of competition, a creative and innovative mind would enable them to be "swift to act" in the realm of change. It was essential for a music producer to have "an inquisitive mind" and "keep pace" with the latest developments in music technology. The issue of "adoptability, adaptability and flexibility" came to the fore. As key players in the music industry, they must be given challenging tasks and expected to come up with unique productions that will "create a space for them in the big music market". Therefore, there is a need for exposure to the real world in their training through apprenticeship so as to "interact with artists and the studio environment". Therefore, it is imperative that music producers are trained on how to interact with the music market creatively. This is because they "need to know the music market functions and what the audience of the moment would live to relate with". Another way of exposure is through various media, for example, YouTube, Instagram, Facebook, SoundCloud, iTunes and Spotify. Creativity is developed by "watching and observing the others" to come up with "what you can call yours". It was suggested that the best way of training

musical personnel is to train them "to listen to lots of songs... always be online to listen to the latest trends and styles of music to be able to learn the direction music is taking." They should also be trained to invent new musical styles, be original and avoid copying. Their "creative inventions" or music compositions could be marketed by the utilization of technological provisions like 'Myspace' where they could upload "without paying a shilling". In this way, their music would permeate the global community and "gain recognition within seconds". Music composition can also be enhanced by technologies like loop pedals that enables one to engage a variety of instrumental combinations to a solo performance.

Weng and Chen (2020) expound more on the issue of creativity and the utilization of technology. Their premise is that a lot of emphasis should be placed on artistic creation, performance, and music in music production. To produce the products like digital files, online streaming, CDs, DVDs, Vinyl records, videos, and tapes, a lot of creativity is required. Weng and Cheng (2020) are of the view that music producers should be trained to have an inquisitive mind where learning becomes continuous, and in this way, their knowledge, understanding, and aesthetic perception is sharpened. Further, Ternhg (2012) as cited by (Gullo & Thren, 2019) considers creativity in music production as an indicator of quality and authenticity and together with innovation; they form the core of music production training. Toulson and Hepworth-Sawyer (2018) consider a successful music producer as one who is wise and can create and innovate. According to Toulson and Hepworth-Sawyer (2018):

Successful practitioners (and students) innovate both technically, creatively and entrepreneurially, and the process of innovation yields the new tools and practices that can be further synthesized and evaluated. The wise practitioner is the one who is knowledgeable, practical and innovative with substantial in-field experience that enables intuitive decision making and the ability to impart wisdom to others. (Toulson & Hepworth-Sawyer, 2018, p. 23)

Indeed the music production job market requires wise practitioners who can decisively make profitable decisions in their practice and influence the development of the music job market.

Ethical Requirements in Music Production Job Market

The participants were required to read the given items and tick (✓) each of the skills they considered: 1. Non-essential or 2. Essential, in the music production job market. The following table 3 depicts the results of findings on ethical aspects required in music production job market:

Table 3: Ethical Requirements in the Music Production Job Market

Ethical Requirements	Response			
	Non-essential		Essential	
	F	%	F	%
Accountability	0	0	160	100
Transparency	0	0	160	100
Self-discipline	0	0	160	100
Respect for customers	0	0	160	100
Performance of ethically acceptable songs	97	60.6	63	39.4
Hard work	0	0	160	100
Adherence to work rules	0	0	160	100
Loyalty to the management	0	0	160	100
Adaptability and flexibility	0	0	160	100

The results in table 4.3 indicate that almost all the ethical requirements were considered essential in the music production job market. These include accountability 160(100%), transparency 160(100%), self-discipline 160(100%), respect for customers 160(100%), hard work 160(100%), adherence to work rules 160(100%), loyalty to the management 160(100%), adaptability and flexibility 160(100%). However, some participants considered the performance of ethically acceptable songs as non-essential 97(60.6%) while others termed it as essential 63(39.4%). This reflects on the relativity of music production job market in

terms of what kind of music to be to be produced. Perhaps the driving force is what sells in the music job market.

Participants highlighted self-discipline and hard work as virtues that are to be instilled in trainee music producers. In other words, “strong work ethics” is recommended for the success of a music producer in the music production job market. They described the music production occupation as very challenging. It included having a very tight schedule with “incessant demands from customers”. If one cannot keep their

word in meeting deadlines and coping with pressure, "let them forget about the idea of dreaming of being a music producer". Patience and resilience are required to handle technical issues. This will enable the music producer to "soar high" and realize their vision. "The work of overseeing every detail in the studio is more than what an ordinary person can take". The implication of this statement is that being a music producer requires determination and focus. It is not only about the producer's vision but the realization of the client's vision as well. A music producer needs "to step into the desire of the artist and go beyond" to build him or her in "becoming a star". The artist's stardom is what will expand the producer's "territory in the music business".

In support of these findings, Binkely (2017) recommends that a music producer should be able to multitask as a team player, organizer, and a mediator with good communication skills, a good time manager, and deliver on time. Gullo & Thren (2019) add that modern music producers play a multifaceted role in their dispensation of duties as opposed to traditional music producers. These include songwriting, sound engineering, and instrumentalist and singing. These are possible because of the useful tools availed by the prevailing technology which allows for multiple functions in music production.

Ryan (2017) acknowledges the fact that music producers' skills are as a result of unique training backgrounds. Nevertheless, any training must achieve to bring up a music producer with the work ethic and drive, networking skill to establish the relationship, musical training to comprehend the nature of music,

knowledge of recording techniques to handle both digital and analogue recording equipment, budgeting for projects and music personnel services and studio equipment, and collaborative ability. Walzer (2016) proposes a music production curriculum that pays attention to recording and promotion skills and creative marketing. In training music producers, universities should aim at orienting the learners to global practices. Training music producers should include research skills that will enhance their capacity to learn for life. This will enhance their ability to critically think, create and innovate in their pursuit to contribute to new developments in music production.

University Music Curriculum Document Analysis Checklist

The document analysis checklist aimed to provide supplementary data. It was designed to provide comparison points of university music curricula content and requirements of selected music job markets in Kenya. This was an attempt to identify the similarity or diversity of university music curricula content and the requirements of selected music job markets in Kenya. There were two university music curricula from University X and Y (see Appendix VI). The two were analysed separately and then compared to the requirements of each of the selected music job markets in Kenya.

University Music Curriculum Document Analysis Checklist of University X

The university music curricula document checklist was analysed in terms of technical skills, management skills and ethical requirements. The availability of the skills was marked by a tick (✓) or (✗) sign to indicate

whether, neither the skill nor the course title is available or the skill and the course title are functional.

Music Production Curriculum Course Content of University X

The curriculum course content of university X was analysed in terms of technical skills, management skills and ethical requirements of music production.

Music Production Technical Skills Available in University X Music Curriculum Course Content

The curriculum course content of university X was analysed in terms of technical skills requirements of music production. Table 4 shows the results of findings on technical skills for music production job market:

Table 4: Music Production Technical Skills Available in University X Music Curriculum Course Content:

Technical Skills	Availability	
	Neither the skill nor the course title is available.	The skill and course title is available.
Recording skills		✓
Sound reinforcementskills		✓
Mixing of sound skills		✓
Editing of the recording		✓
Handling analogue records	×	
Handling digital records		✓
Balancing of individual recorded tracks skills	×	
Blending of music sounds skills.		✓
Adding sound effects skills	×	
Adding instrumental parts to voice		✓
Singletrack and multitrack recording skills		✓
Detecting sound changes skills		✓
Mastering skills	×	
Information literacy and ICT skills	×	
Music theory skills (reading and writing music)		✓
Music performance (vocal and instrumental) skills		✓
Music conducting skills		✓
Music scoring skills		✓
Music appreciation skills		✓

Knowledge of different types of music		√
Music composition skills		√
Music improvisation skills (both vocal and instrumental)		√

The results in table 4 indicate that music production technical skills that were available in university X music curriculum course content were: recording skills, sound reinforcement skills, mixing of sound skills, editing of the recording, handling digital records, blending of music sounds skills, adding instrumental parts to voice, single track and multitrack recording skills, detecting sound changes skills, music theory skills (reading and writing music), Music Performance (vocal and instrumental) skills, music conducting skills, music scoring skills, music appreciation skills, knowledge of different types of music, music composition skills, and music improvisation skills (both vocal and instrumental).

On the other hand, there were music production technical skills that not available in university X music curriculum course content. These were: handling analogue records, balancing of individual recorded tracks skills, adding sound effects skills, mastering skills, and information literacy and ICT skills.

Music Production Management Skills Available in University X Music Curriculum Course Content

The curriculum course content of university X was analysed in terms of management skills requirements of music production. Table 5 shows the results of findings on management skills for music production job market:

Table 5: Music Production Management Skills Available in University X Music Curriculum Course Content:

Management Skills	Availability	
	Neither the skill nor the course title is available	The skill and the course title are available
Verbal and written communication skills		√
Team working and interpersonal skills		√
Networking skills	x	
Problem-solving skills	x	
Negotiation skills with customers	x	
Music industry awareness		√
Music business skills	x	
Time management for recording work		√
Session management skills	x	

Leadership skills		√
Legal /copyright skills		√
Contractual rights and obligations skills		√
Accounting skills	x	
Marketing skills	x	
Customer handling skills		√

Table 5 indicates that music production management skills that were available in university X music curriculum course content are verbal and written communication skills, team working and interpersonal skills, music industry awareness, time management for recording work, leadership skills, legal /copyright skills, contractual rights and obligations skills, and customer handling skills.

However, several management skills were not available in university X music curriculum course content as follows: networking skills, problem-solving

skills, and negotiation skills with customers, music business skills, session management skills, accounting skills, and marketing skills.

Music Production Ethical Requirements Available in University X Music Curriculum Course Content

Curriculum course content for university X was analysed in terms of ethical requirements of music production job market. Table 6 shows the results of findings on ethical requirements for music production job market for university X:

Table 6: Music Production Ethical Requirements Available in University X Music Curriculum Course Content:

Ethical Requirements	Availability	
	Neither the skill nor the course title is available	The skill and the course title are available
Accountability	x	
Transparency	x	
Self-discipline		√
Respect for customers	x	
Performance of ethically acceptable songs	x	
Hard work		√
Adherence to work rules	x	

Loyalty to the management	x	
Adaptability and flexibility	x	

The findings in table 6 clearly indicate that a minimal number of music production ethical requirements were available in university X music curriculum course content. These were hard work and self-discipline. In contrast, most of the music production ethical requirements were not available in university X music curriculum course content. These included: accountability, transparency, respect for customers, the performance of ethically acceptable songs, adherence to work rules, loyalty to the management, and adaptability and flexibility.

Simple Matching Coefficient of University X Music Curriculum Course Content to the Requirements of Music Production Job Market Skills

Tables 7, 8 and 9 on consecutive pages show the number of technical skills required in the music teaching job market and against the ones identified in university X music curriculum course content. The total number (N) of skills is derived by adding the technical skills, management skills, and ethical requirements (binary attributes) which adds up to N=46. The two variables, in this case, are university music X music curriculum course content in terms of given skills (A) and music production job market skills (B) each with N=46 binary attributes.

Table 7: Comparison of Technical Skills Required in the Music Production Job Market with those available in University X Music Curriculum Course Content

Technical Skills	Music Production Job Market	University X Music Curriculum
Recording skills	1	1
Sound reinforcementskills	1	1
Mixing of sound skills	1	1
Editing of the recording	1	1
Handling analogue records	1	0
Handling digital records	1	1
Balancing of individual recorded tracks skills	1	0
Blending of music sounds skills	1	1
Adding sound effects skills	1	0
Adding instrumental parts to voice	1	1
Singletrack and multitrack recording skills	1	1
Detecting sound changes skills	1	1
Mastering skills	1	0

Information literacy and ICT skills	1	0
Music theory skills (reading and writing music)	1	1
Music performance (vocal and instrumental) skills	1	1
Music conducting skills	1	1
Music scoring skills	1	1
Music appreciation skills	1	1
Knowledge of different types of music	1	1
Music composition skills	1	1
Music improvisation skills (both vocal and instrumental)	1	1

Table 8: Comparison of Management Skills Required in the Music Production Job Market with those Available in University X Music Curriculum Course Content

Management Skills	Music Production Job Market	University X Music Curriculum
Verbal and written communication skills	1	1
Team working and interpersonal skills	1	1
Networking skills	1	0
Problem-solving skills	1	0
Negotiation skills	1	0
Music industry awareness	1	1
Music business skills	1	0
Time management for recording work	1	1
Session management skills	1	0
Leadership skills	1	1
Legal /copyright skills	1	1
Contractual rights and obligations skills	1	1
Accounting skills	1	0
Marketing skills	1	0
Customer handling skills	1	0

Table 9: Comparison of Ethical Skills required in the Music Production Job Market with those available in University X Music Curriculum Course Content

Ethical Requirements	Music Production Job Market	University X Music Curriculum
Accountability	1	0
Transparency	1	0
Self-discipline	1	1
Respect for customers	1	1
Performance of ethically acceptable songs	1	0
Hard work	1	1
Adherence to work rules	1	0
Loyalty to the management	1	0
Adaptability and flexibility	1	0

Given two variables, in this case, university music curriculum course content **A** and music job market requirements **B**, each with *n* binary attributes, SMC is defined as:

SMC= Number of matching attributes

Number of attributes

$$SMC = M_{00} + M_{11}$$

$$M_{00} + M_{01} + M_{10} + M_{11}$$

Where:

M₁₁ is the total number of attributes, where **A** and **B** both have a value of 1.

M₀₁ is the total number of attributes where the attribute of **A** is 0 and the attribute of **B** is 1.

M₁₀ is the total number of attributes where the attribute of **A** is 1 and the attribute of **B** is 0.

M₀₀ is the total number of attributes where **A** and **B** both have a value of 0. (Wikipedia, 2018, p. 1)

$$SMC = \frac{0 + 27}{0 + 19 + 0 + 27} = \frac{27}{46} = 0.59$$

Therefore, the Simple Matching Coefficient of university music curriculum content to the requirements of the music production job market is **0.59**. The Simple Matching Distance (SMD), measuring differences between sample sets, is given by **1-SMC** (Wikipedia, 2018, p. 1). In this case the **SMD= 1-0.59= 0.41**. The university music curriculum for university **X** does not match the requirements of the music production job market by 0.41. The missing course content in the university music curriculum is: handling analogue records, balancing of individual recorded tracks skills, adding sound effects skills, mastering skills, and information literacy and ICT skills (Technical skills); networking skills, problem-solving skills, negotiation skills, music business skills, session management skills, accounting skills, marketing skills,

and customer handling skills (Management skills); accountability, transparency, the performance of ethically acceptable songs, adherence to work rules, loyalty to the management, and adaptability and flexibility (Ethical requirements). These skills will provide a basis for its future incorporation in the university music curricula for relevance.

University Music Curriculum Document Analysis Checklist of University Y

The document analysis checklist aimed to provide supplementary data. It was designed to provide comparison points of university music curricula content and requirements of selected music job markets in Kenya. This was an attempt to identify the similarity or diversity of university music curricula content and the requirements of selected music job markets in Kenya. The document was analysed separately and then compared to the requirements of each of the selected music job markets in Kenya. The university music curricula were analysed in terms of

technical skills, management skills and ethical requirements. The availability of the skills was marked by a tick (✓) or (×) sign to indicate whether, neither the skill nor the course title is available or the skill and the course title are available.

Music Production Curriculum Course Content of University Y

The curriculum course content of university Y (see Appendix VI) was analysed in terms of technical skills, management skills and ethical requirements of music production.

Music Production Technical Skills Available in University Y Curriculum Course Content

The curriculum course content of university Y was analysed in terms of technical skills requirements of music production. Table 10 shows the results of findings on technical skills for music production job market:

Table 10: Music Production Technical Skills Available in University Y Music Curriculum Course Content:

Technical Skills	Availability	
	Neither the skill nor the course title is available	The skill and the course title are available
Recording skills		✓
Sound reinforcementskills		✓
Mixing of sound skills		✓
Editing of the recording skills		✓
Handling analogue records		✓
Handling digital records		✓
Balancing of individual recorded tracks skills		✓
Blending of music sounds skills		✓

Adding sound effects skills		✓
Adding instrumental parts to voice		✓
Singletrack and multitrack recording skills		✓
Detecting sound changes skills		✓
Mastering skills		✓
Information literacy and ICT skills		✓
Music theory skills (reading and writing music)		✓
Music performance (vocal and instrumental) skills		✓
Music conducting skills		✓
Music scoring skills		✓
Music appreciation skills		✓
Knowledge of different types of music		✓
Music composition skills		✓
Music improvisation skills (both vocal and instrumental)		✓

As indicated in table 10, all music production technical skills were available in university Y music curriculum course content. These were recording skills, sound reinforcement skills, mixing of sound skills, editing of the recording skills, handling analogue records, handling digital records, balancing of individual recorded tracks skills, blending of music sound skills, adding sound effects skills, adding instrumental parts to voice, single track and multitrack recording skills, detecting sound changes skills, mastering skills, information literacy and ICT skills, music theory skills (reading and writing music), music performance (vocal and instrumental) skills, music conducting skills, music

scoring skills, music appreciation skills, knowledge of different types of music, music composition skills, and music improvisation skills (both vocal and instrumental).

Music Production Management Skills Available in University Y Music Curriculum Course Content

The curriculum course content of university Y was analysed in terms of management skills requirements of music production. Table 11 shows the results of findings on management skills for music production job market:

Table 11: Music Production Management Skills Available in University Y Music Curriculum Course Content:

Management Skills	Availability	
	Neither the skill nor the course title is available	The skill and the course title are available
Verbal and written communication skills		√
Team working and interpersonal skills		√
Networking skills		√
Problem-solving skills		√
Negotiation skills with customers		√
Music industry awareness		√
Music business skills		√
Time management for recording work		√
Session management skills		√
Leadership skills		√
Legal /copyright skills		√
Contractual rights and obligations skills		√
Accounting skills		√
Marketing skills		√
Customer handling skills		√

As evidenced in Table 11, all music production management skills were available in university Y music curriculum course content as follows: verbal and written communication skills, team working and interpersonal skills, networking skills, problem-solving skills, negotiation skills with customers, music industry awareness, music business skills, time management for recording work, session management skills, leadership skills, legal /copyright skills, contractual

rights and obligations skills, accounting skills, marketing skills, and customer handling skills.

Music Production Ethical Skills Available in University Y Music Curriculum Course Content

Curriculum course content for university Y was analysed in terms of ethical requirements of music production job market. Table 12 below shows the results of findings on ethical requirements for music production job market:

Table 12: Music Production Ethical Requirements Available in University Y Music Curriculum Course Content:

Ethical Requirements	Availability	
	Neither the skill nor the course title is available	The skill and the course title are available
Accountability		✓
Transparency		✓
Self-discipline		✓
Respect for customers		✓
Performance of ethically acceptable songs		✓
Hard work		✓
Adherence to work rules		✓
Loyalty to the management		✓
Adaptability and flexibility		✓

The findings in table 12 reveal that all the music production ethical requirements were available in university Y music curriculum course content. These were accountability, transparency, self-discipline, respect for customers, the performance of ethically acceptable songs, the performance of ethically acceptable songs, hard work, adherence to work rules, loyalty to the management, loyalty to the management, and adaptability and flexibility.

Simple Matching Coefficient of University Y Music Curriculum Course Content to the Requirements of Music Production Job Market

Tables 13, 14 and 15 **show** the number of technical skills required in the music production job market and against the ones identified in university X music curriculum. The total number (**N**) of skills is derived by adding the technical skills, management skills and ethical requirements (binary attributes) which adds up to N=46. The two variables, in this case, are university music curriculum course content in terms of given skills (**A**) and music production job market skills (**B**) each with **N=46** binary attributes.

Table 13: Comparison of Technical Skills Required in the Music Production Job Market with those Available in University Y Music Curriculum Course Content

Technical Skills	Music Production Job Market	University Y music Curriculum
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Recording skills	1	1
Sound reinforcementskills	1	1
Mixing of sound skills	1	1
Editing of the recording skills	1	1
Handling analogue records	1	1
Handling digital records	1	1
Balancing of individual recorded tracks skills	1	1
Blending of music sounds skills	1	1
Adding sound effects skills	1	1
Adding instrumental parts to voice	1	1
Single-track and multitrack recording skills	1	1
Detecting sound changes skills	1	1
Mastering skills	1	1
Information literacy and ICT skills	1	1
Music theory skills (reading and writing music)	1	1
Music performance (vocal and instrumental) skills	1	1
Music conducting skills	1	1
Music scoring skills	1	1
Music appreciation skills	1	1
Knowledge of different types of music	1	1
Music composition skills	1	1
Music improvisation skills (both vocal and instrumental)	1	1

Table 14: Comparison of Management Skills Required in the Music Production Job Market with those Available in University Y Music Curriculum Course Content

Management Skills	Music Production Job Market	University Y Music Curriculum
Verbal and written communication skills	1	1

Team working and interpersonal skills	1	1
Networking skills	1	1
Problem-solving skills	1	1
Negotiation skills with customers	1	1
Music industry awareness	1	1
Music business skills	1	1
Time management for recording work	1	1
Session management skills	1	1
Leadership skills	1	1
Legal /copyright skills	1	1
Contractual rights and obligations skills	1	1
Accounting skills	1	1
Marketing skills	1	1
Customer handling skills	1	1

Table 15: Comparison of Ethical Skills Required in the Music Production Job Market with those Available in University Y Music Curriculum Course Content

Ethical Requirements	Music Production Job Market	University Y Music Curriculum
Accountability	1	1
Transparency	1	1
Self-discipline	1	1
Respect for customers	1	1
Performance of ethically acceptable songs	1	1
Hard work	1	1
Adherence to work rules	1	1
Loyalty to the management	1	1
Adaptability and flexibility	1	1

Given two variables, in this case, university music curriculum course content **A** and music job market requirements **B**, each with **n** binary attributes, SMC is defined as:

SMC= Number of matching attributes

Number of attributes

$$SMC=M_{00} + M_{11}$$

$$M_{00} + M_{01} + M_{10} + M_{11}$$

Where:

M₁₁ is the total number of attributes, where **A** and **B** both have a value of **1**.

M₀₁ is the total number of attributes where the attribute of **A** is **0**, and the attribute of **B** is **1**.

M₁₀ is the total number of attributes where the attribute of **A** is **1** and the attribute of **B** is **0**.

M₀₀ is the total number of attributes, where **A** and **B** both have a value of **0**. (Wikipedia, 2018, p. 1)

$$SMC= \frac{0 + 46}{0 + 0 + 0 + 46} = 46/46 = 1$$

Therefore, the Simple Matching Coefficient of university music curriculum course content to the requirements of the music production job market is **1**. The Simple Matching Distance (SMD), which measures differences between sample sets, is given by **1-SMC** (Wikipedia, 2018, p. 1). In this case the **SMD= 1-1= 0**. The university music curriculum for university **Y** matches the requirements of the music production job market by **1**. Notably, the university **Y** music

production curriculum stands out as the one that is relevant to the music production job market.

CONCLUSION

It can be concluded that university music curriculum of university **X** did not match the requirements of music production job market in Kenya by almost a half. The Simple Matching Coefficient (SMC) of university **X** music curriculum content to the requirements of the music production job market was **0.59**. The Simple Matching Distance (SMD), which measures differences between sample sets, was **0.41**. The university music curriculum for university **X** did not match the requirements of the music production job market by **0.41**. The missing course content in the university music curricula was: handling analogue records, balancing of individual recorded tracks skills, adding sound effects skills, mastering skills, and information literacy and ICT skills; networking skills, problem-solving skills, negotiation skills, music business skills, session management skills, accounting skills, marketing skills, and customer handling skills (Management skills); accountability, transparency, the performance of ethically acceptable songs, adherence to work rules, loyalty to the management, and adaptability and flexibility (Ethical requirements). These skills will provide a basis for its future incorporation in the university music curricula for relevance. The results confirm the perception that university music curriculum does not match the requirements of music job markets in Kenya. However, as revealed in the findings, this is specific to specific job markets and university. Therefore the responsibility tailoring music programmes to the given job market are the mandate of each university Kenya.

In contrast, university Y music curriculum matched the requirements of music production job market in Kenya by 100%. As indicated in table 10, all music production technical skills were available in university Y music curriculum course content. These were recording skills, sound reinforcement skills, mixing of sound skills, editing of the recording skills, handling analogue records, handling digital records, balancing of individual recorded tracks skills, blending of music sound skills, adding sound effects skills, adding instrumental parts to voice, single track and multitrack recording skills, detecting sound changes skills, mastering skills, information literacy and ICT skills, music theory skills (reading and writing music), music performance (vocal and instrumental) skills, music conducting skills, music scoring skills, music appreciation skills, knowledge of different types of music, music composition skills, and music

improvisation skills (both vocal and instrumental). This finding revealed that that the music production university music curricula could not be entirely termed as 'irrelevant', but it depended on individual universities.

RECOMMENDATIONS

The university should empower a special music curricula panel who can constantly review the curriculum through research to suggest findings to music schools in regard to music production. Music schools at the university should work directly with CUE in ensuring quality and standards in curriculum development. In addition, University music schools should revise and restructure their music curricula course titles and content to accurately reflect music production programs in order to compete in a favourable manner locally and internationally.

REFERENCES

- Binkely, S. (2017). The job description of a music production manager. Retrieved, 14/7/20 at 2.25 pm from <https://career trend.com>.
- Brendan, A. (2017). Mixing as a performance: creative approaches to the popular music mixprocess. *Journal on the Art of Record Producers*. 11, ISSN: 1754-9892. Retrieved, 26/6/19 at 9.20 pm from <https://www.arjournal.com>
- Burgess, R. J. (2013). *The art of music production the theory and practice* (4th Ed.). New York: Oxford University Press.
- Colquhoun, S. (2018). Popular music genres, music producers, and song creation in the general music classroom. *General Music Today* 2018, 31(2) 17–20. DOI: 10.1177/1048371317710311.
- Elliot, D. J. (2005). *Praxial music education: Reflections and dialogues*. New York, NY: Oxford University Press.
- Gullo, J. & Thren, D. (2019). Music production in Swedish higher education: History and future challenges. *STM-sjm*, 101. Retrieved, 1/6/20 at 4.32 pm from diva-portal.org

- Mawusi, E. F., & Kwadwo, K. E. (2020). The role of technology in music education: A survey of computer usage in teaching music in colleges of education in the Volta Region, Ghana. *International Journal of Scientific Research and Management (IJ & RM)*. 8(1), 1139- 1156.
- Riechi, A. (2010). *Demand for regular academic programmes offered in Kenya's public universities and their relevance to the labour market*. Retrieved from <https://www.researchgate.net/publication/45812569>.
- Taulson, R., & Hepworth-Sawyer, R. (2018). Connected learning journeys in music production education. *Journal of Music Technology and Education*, 11(3), 269-268.
- UNESCO (2018). *Education for all global monitoring report: Teaching and learning: Achieving quality for all*. Retrieved, 16/9/2018 at 3.30 am from <http://en.unesco.org>
- Vazquez, A. R. R. (2017). *The music industry in the dawn of the 21st century. Networking for the thriving music industry*. Retrieved, 23/1/2019 at 2.00 pm from https://kunnskapsverket.org/sites/.../the_music_industry_ricardo_alvarez_2017.pdf
- Walzer, D. A. (2016). *Independent music production, how individuality, technology, and creative entrepreneurship influence contemporary music industry practices*. Retrieved from tandfonline.com/doi/ass/10.1080/17510694.20161247626.
- Webber, S. (2019). Online undergraduate-level course. Creative music production skills. Retrieved from <https://online.berklee.edu>.
- Weng, S., & Chen, H. (2020). *Exploring the role of deep learning technology in the sustainable development of the music industry*. Retrieved, 23/6/2020 at 10.00 am from <https://www.researchgate.net/publication/33865287>.
- Wiederkehr, G. A. (2015). *The role of music theory in music production and engineering*. Masters Thesis, University of Oregon, USA.