Research Article

Comparative Review of Sculpture Programmes in Kwame Nkrumah University of Science and Technology and University of Education, Winneba

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The desire for Ghana's economic liberation through skill-oriented education to raise the required human capital for economic transformation makes Sculpture or Art essential to the education system of Ghana and around the world. However, the majority of students who graduate from or complete the Sculpture section of Kwame Nkrumah University of Science and Technology and the University of Education, Winneba, deviate from practising Sculpture or Art into other fields. The effectiveness of any educational system in terms of learner academic performance depends on the quality of teaching and learning techniques, material resources, human resources, and the transition or history of the program or section. The study was designed to review the Sculpture programmes at Kwame Nkrumah University of Science and Technology (KNUST) and the University of Education, Winneba (UEW). Data elicited through questionnaires, interviews, and observation of the participants were mainly analyzed thematically and explicitly presented in percentages, tables, and photographs with detailed textual explanations. A total of 105 students, 7 lecturers, 3 non-teaching staff, and 2 heads of the department participated in the study. The KNUST Sculpture Programme has been run for 59 years, and the UEW Sculpture Programme for 27 years, in the same infrastructure inherited from colleges with considerably lower standards. The university administration and the government should come to an agreement to collaborate on improving the infrastructure, facilities, and equipment of both programmes.

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1. Introduction

Sculpture is one of the oldest forms of visual art and one of the most visible forms of artwork. Sculptures are more than just beautiful objects; they also teach us about ancient civilizations and aid in our understanding of history, whether classical, as in Michelangelo's David, or contemporary, as in Marcel Duchamp's Fountain (Edem, 2021). According to Witcombe (1995), sculpture can be traced to the prehistoric era when early man-shaped stones, wood, bones, and other materials were turned into weapons and flint tools for self-defence. Sculpture is a type of art in which three-dimensional art objects are created out of hard or plastic materials. Freestanding objects, reliefs on surfaces, and settings ranging from tableaux to encompassing contexts are all options. Clay, wax, stone, metal, fabric, glass, wood, plaster, rubber, and various "found" materials are among the media used. Carved, modelled, cast, wrought, welded, stitched, assembled, or otherwise shaped and incorporated materials (Rogers, 2020). According to Rogers (2020), sculpture is not a defined term that refers to a definite group of items or sets of actions. It is, instead, the word for an art form that facilitates the creation, continuously expanding its scope of activities and producing new types of objects. The definition was considerably broader in the second half of the twentieth century than it had been only two or three decades before. No one can predict its future expansions, given the fluid state of the visual arts in the twenty-first century. In Ghana, ethnic groups such as the Akan and Ga-Dagbe carry their chiefs in palanquins, sculptures. Sculpture began as a hobby at Achimota School and later evolved into an examinable subject. It first appeared on school and college timetables as "hand and eye" as part of an attempt to incorporate practical topics into the school curriculum (Edusei, 2004). Sculpture has benefited humanity in several ways and has become a study programme at all levels of senior high school, colleges of education, polytechnics, and universities. Sculpture was established to encourage creativity in students, allowing them to approach national problems with related instances (Edusei, 2004). These were achievable since students only think about art and express themselves artistically in Art class. Sculpture, once again, has an integrating impact on the personalities of the students. Sculpture was also designed to keep students from becoming unemployed after completing the program. After graduation, students can open their own art studios and companies. From the researchers' experiences and observations in both sections, most of the students who complete the programmes do not continue practising sculpture. The majority of the students deviate

from practising sculpture and pursue other fields. Although the UEW Sculpture department aims to teach students to go out and teach Art in Ghana's pre-tertiary schools, most of them teach but do not practice what they teach. Furthermore, students at Kwame Nkrumah University of Science and Technology (KNUST) generally deviate from sculpture or art into other areas. The problem now is that there have not been surveys to know the academic tradition and the various changes that have transpired in the University of Education, Winneba (UEW), and Kwame Nkrumah University of Science and Technology (KNUST) Sculpture section. With this background, the study investigates the two sections' missions and visions by analyzing the transitions, structure and content, resources, and learning habits of both students.

The study sought to answer the following questions:

1. What type of historic transitions and developments have the KNUST Sculpture programme and the UEW Art Education programme with sculpture as an option gone through?
2. How different is the structure and content of the Sculpture programme of KNUST from the UEW Art Education programme with the option of Sculpture?
3. What impacts do the two programmes and their resources have on the learning habits of KNUST and UEW Sculpture students?

2. Literature review

2.1. Evaluation

The process of assessing a programme critically is known as evaluation. It entails gathering and analyzing data on the occurrences, characteristics, and outcomes of a programme. Its goal is to make decisions about a programme in order to improve its effectiveness and to provide programming advice (Patton, 1987). According to Kiran (2016), evaluation is the assessment of learning. When there is no effective and efficient evaluation mechanism, knowledge is incomplete. The final and most crucial element of the educational process is evaluation. The assessment method must be effective and practical enough to serve the goal for which it was created. For it to be satisfying, it must be appropriate and accurate. The integral aspect of the educational process is evaluation. The emphasis of assessment is on improving local quality and is similar to clinical auditing. As part of the quality assurance procedures, every school needs evaluation, but the importance of evaluation is far greater than the provision of simple review information. It gives proof of how well the teaching strategies of teachers are being

accomplished and whether teaching expectations are being maintained (Morrison, 2003). Allan (1970), like Wheeler (1967), stressed educational evaluation procedures. He described evaluation as the process of determining the decision areas of concern, selecting appropriate information, gathering and analyzing information, and reporting a summary of facts useful to decision-makers in choosing among options. Paul (1976) described evaluation as "a judgment on the worth or influence of a program, technique, or individual, as well as the process by which that judgment is formed."

2.2. Teaching and Learning Theories

In terms of how we learn, grow, and develop, human beings have different approaches. Theories on various teaching and learning have advanced from these experiences (Ashworth *et al.*, 2004). Ashworth, Brennan, Egan, Hamilton, and Saenz (2004) write that Merriam and Caffarella (1999) explain that behavioural learning originated as an art theory whose objective was to predict and control behaviour. Learning was manifested by a change in behaviour, emphasizing a connection between a stimulus and a response. Behaviourism holds the belief that knowledge exists independently of people.

2.3. The Art Programme and its Content

Day after day, art educators strive to elevate the standing of Art in the classroom (Sidelnick, 1995). Henry and Lazzari (2007) enforce art education programmes to meet students' educational needs. The essence is to prepare the learners to face the fundamental challenges in life. According to Oppong-Berko, 2012, Jeffers and Fong (2000) see time allocation for multiple lessons as another vital ingredient in art educational programmes. As the intention of an extensive and well-balanced art curriculum, Jeffers and Fong expand on the above points that to accomplish this, a suitable curriculum must be introduced, and its design must conform to students' developmental stages, abilities, preferences, environment, media discovery, and studio practice.

2.4. Material Resources

Studio operation predominates in Art instruction at the elementary, middle, and high school levels. Studio instruction must be prioritized if art education practice is to reflect a concern for teaching for understanding. To Walker (1996), studio teaching and action are viewed as the pivot around art education. Sidelnick (1995) adds that Art workspaces and workshops must exist independently from lecture halls. Walker continues that studios and seminars should be spacious and well-equipped with art equipment and materials to facilitate teachers' instructional strategies. The studio is a venue where students'

learning activities can be used to imitate the work environment they will experience later in their professions. According to Sidelnick (1995), Francis and Parker state that art teachers must encourage variety in students' studio activities not to create similar works. These necessitate art teachers to examine their educational principles and philosophies while implementing the program. When art teachers give much attention to their students in the studio, there will be much improvement.

2.5. Teaching and Learning

The relationship between teaching and learning is explored in terms of integrating the two phenomena on several dimensions. Traditionally, teaching and learning have been analyzed separately. This argument is based on the notion that, in an educational context, teaching and learning are so closely connected in a complicated and reciprocal process that they should be considered as a single thing rather than as two different entities. The evolution of teaching and learning research and theory and topics related to the application of psychological theory to educational practices were investigated to gain insight into the types of issues that should be pursued in the next generation of teaching-learning research. Several methods to the application challenge are investigated, and a study instance that combines teaching and learning issues (Shuell, 1993). Oppong-Berko (2012) states that “In every educational process, the most cardinal components are teaching and learning, while learning deals with the primary purpose of education, teaching, on the other hand, handles the means through which the purpose (objective) is achieved.” He further said that, according to Mellon (2008), it is “a complicated, multidimensional activity that frequently requires teachers to manage many tasks and goals concurrently and flexibly.” On the other hand, Andragogy is a teaching approach that includes five elements: explaining to students the importance of learning, instructional methods, linking the subject to real-life experiences, inspiring, and assisting them in overcoming personal challenges. Heutagogy, on the other hand, helps students cultivate the "I can do it" spirit on their own as they focus on what they have learned, search the world, revisit their personal experiences, and engage with others. This instruction method helps students recognize the importance of learning, creativity, environmental awareness, and teamwork in individuals. These teaching methods are essential because of how teachers organize their modelling directions and mediate teaching-learning processes.

2.6. Principles of teaching

Within art education, more research must be done into teacher preparation to understand current practice, identify better what works well, and determine future directions (Henry et al., 2014). According

to Henry et al. (2014), teacher preparation in art education is discussed within the context of recent reform movements in teacher education in general, followed by a description of efforts at one university to make substantive program changes in teacher preparation, with an emphasis on those efforts as manifested within Art education. The focus on one university is not meant to indicate that this approach is inherently unique but rather to highlight features of current practice that may be valuable to others working in Art teacher development.

Mellon (2021) describes teaching as a dynamic, multidimensional practice that frequently requires us to manage several activities and goals at the same time while being flexible. Although putting these ideas into practice requires time and effort, it ultimately saves time and energy. Mellon shared several important teaching principles.

a. **Effective teaching involves acquiring relevant knowledge about students and using that knowledge to inform our course design and classroom teaching**

   We do not simply teach the subject; we also teach the students when we teach. A variety of factors can have an impact on learning. Cultural and generational experiences, for example, influence how students perceive the world; discipline backgrounds influence how they solve issues; and prior knowledge (including true and incorrect parts) affects new learning. Although we cannot measure these features properly, it a) informs the design of the course (e.g., decisions regarding goals, pace, examples, and format), (b) helps to explain difficulties in the student (e.g., identification of common misconceptions), and (c) guides instruction, if the most relevant data have been collected and continued in the course planning process as quickly and as thoroughly as possible (e.g., recognition of the need for additional practice).

b. **Effective teaching involves aligning the three major components of instruction: learning objectives, assessments, and instructional activities**

   Putting in the effort now will save you time later and lead to a better outcome. When (a) teachers express a specific set of learning objectives (i.e., the information and skills that they expect students to demonstrate by the end of a course); (b) instructional activities (e.g., case studies, workshops, discussions, readings) support these learning objectives by providing goal-oriented practice; and (c) assessments (e.g., examinations, papers, problem sets, performances) enable students to show and practice the information and skills specified in the goals, as well as allow teachers to give focused input that can assist in steering future learning.

c. **Effective teaching involves prioritizing the knowledge and skills we choose to focus on**

Coverage is your adversary: do not pack too much into a single class. We must make complex judgments about what we will and will not include in a course since many things are harmful to student development. These involve (a) understanding the course's parameters (for example, class size, students' backgrounds and experiences, course position in the program series, and number of course units), (b) prioritizing student learning, and (c) evaluating several objectives that can be reasonably completed.

2.7. Principles of Learning

According to Johnson and Johnson (2007), as cited by Oppong-Berko (2012), teachers and administrators in the public school system should utilize learning principles as the foundation for the activities they plan for their students. They proposed the following learning principles:

a. **Learning is an active process of knowledge building.**

Teachers and administrators should, therefore, create environments and plan experiences that encourage research, questioning, prediction, exploration, collection, educational activity, and communication, as well as involve students in experiences that foster personal knowledge building, such as practical experience, scientific thinking, theatre, creative movement, and artistic representation.

b. **Students can build and make knowledge of their previous knowledge and experience meaningful.**

It means that teachers and administrators must determine what students already know and can do. They should build learning environments and design activities that rely on the students' past knowledge and ensure that students are represented in the learning materials of the school. They also give chances for students to explore, identify, and confirm their ethnic, cultural, and social identities and ensure that students are welcomed and encouraged to learn from the past by integrating new and existing understandings.

2.8. Feedback

Research has shown that assessments and feedback determine what and how students learn. According to Ferguson (2011), as cited by Kabir and Rahman (2016), considering feedback and its value and effectiveness in student learning, a substantial and growing body of research in higher education environments can be found. Feedback is considered a vital approach to facilitate students' development

as independent learners in order to monitor, evaluate, and regulate their own learning. In Carless (2006)'s study of differing feedback expectations between teachers and students, it was discovered that tutors: (1) feel they provide more complete feedback than students believe they get, and (2) perceive their feedback to be more beneficial than students believe it is.

The feedback on this research focuses on the responses that lecturers present to their students and the influence it has on students' outcomes at both KNUST and UEW in Ghana. The researcher will highlight feedback's impact on the students' and lecturers' lives through contact with them and data collection.

3. Research Methodology

The study adopted a mixed methods research methodology with specific reference to multiple case studies and descriptive research. The rationale for the research methodology choice was to obtain in-depth knowledge about human resources and material resources and ascertain the role of lecturers and non-teaching staff in the sections and students' academic achievement.

3.1. Population

The population in this context connotes the group to whom research findings can be generalized. The population for the study consisted of the heads of department, the sculpture lecturers, sculpture students from level 100 to 400, and non-teaching staff in the sculpture section in both KNUST and UEW. Out of 636 populations in both sculpture sections, 117 participated in this project through purposive and stratified techniques. The instruments used in the study were observation, interviews, and questionnaires.

4. Results and Discussion of Findings

4.1. History, Transitions, and Development of the Sculpture Programmes in KNUST

Conventionally, the principal constituents of "Fine Art" in the "Bachelor of Fine Art" at KNUST are Painting and Sculpture. However, today, the range of what would be considered Fine Art commonly includes additional modern and contemporary formats, such as film, photography, video, performance, environmental art, intelligent systems, and social practice. The Kwame Nkrumah University of Science and Technology (KNUST) has its roots in a traditional Fine Art (Painting and Sculpture) department that was established at the Prince of Wales (Achimota) College in 1927. The department's programmes, among others, were upgraded from a Diploma in Fine Art to a four-year BA Honours Degree in 1964. At the turn

of the century, the BA degree was replaced with a BFA degree. The strictly traditional Fine Art framework and its humanist support expanded to include Post-War, contemporary, and emergent practices. Students are encouraged to cultivate political sensitivity to their practice materials, technologies, and sites (Antwi, 2021). Presently, the department runs BFA Fine Art and Curatorial Practice with respective Painting and Sculpture options united by the international exhibition cultures of Modern Art and Contemporary Art as their primary means of dissemination. Students of the two programme options take a joint foundation programme in the first year and specialize in the second, third, and final years. Soon, the department hopes to draw specific programmes for other Fine Art media and disciplines such as BFA Film, BFA Performance and Theater Art, BFA Curating and Art Writing, BFA Commercial Art, BFA Market, BFA Photography, BFA Exhibition Design, BFA Museum Studies, and BFA Multimedia under the BFA Fine Art and Curatorial Practice Programme (Antwi, 2021).

4.2. History, Transitions, and Development of the Sculpture Programmes in UEW

The Department of Art Education offers a 4-year Bachelor of Art Education. The Department was established in 1992 by the Ghana parliament under PNDC law 322 to meet the growing demand for qualified teachers necessitated by the 1987 education reforms (UEW, 2011). The University of Education, Winneba remained a college until 2004 when Act 672 was enacted to upgrade its status to a full university (Amankwah et al., 2017). The Department has eight Units: Ceramics, Sculpture, Graphic Design, Picture Making, Basketry, Jewelry, Leatherwork, and Textiles. Students admitted into the department are equipped with relevant skills and knowledge to teach art effectively and competently in Ghana's basic and second-cycle institutions. The Sculpture Unit of the Department of Art Education is in the School of Creative Art of the University of Education at Winneba (U.E.W.). The origin of this unit shares the same history with the Kwame Nkrumah University of Science and Technology (KNUST) Sculpture Section (UEW, 2022). The difference set in when the teacher training component of Art and Crafts in the College of Technology was transferred again to Winneba. The Section then became a Department of Art under the Government Specialist Teacher Training College. It remained the only institution training specialist Art Teachers in Ghana until the 1973-74 academic years when third-year specialist courses in Art were initiated in the existing three basic Teacher Training Colleges. The idea was to allow these art teachers to teach the Art Programme in the Junior Secondary School (JSS), now Junior High School (JHS), which was about to commence all over Ghana. The introduction of the secondary school, which is now Senior High School, paved the way for the Winneba Teacher Training College to be upgraded into a university in 1992 as the present University of Education, Winneba. The University was under the University of Cape Coast

(U.C.C.). Again, in the year 2004, the University gained its autonomy with Sculpture inextricably linked as one of the areas of specialization under the Art Education Department. Formerly, the Sculpture course was drawing and sculpture under the Specialist Teacher Training College. These matched its purpose of producing teacher trainees to handle the subject in the second-cycle institution. The internship programme's initial duration, which was one whole year, has been reduced to a semester in the level four hundred first semester. According to Mr. Opoku Mensah (personal communication, 2021), the number of students has greatly increased compared to previous years. At first, it was two credit hours, but currently, it is three credit hours. There were two Sculpture lecturers, and the number of students was sizable for them to handle in those days. Opoku Mensah (personal communication, 2021) stated that his college lecturer had left the university, leaving him alone to teach sculpture. Because of the number of students and the growth of the section, the department appointed two other lecturers to join him, Kpodo and Selassie, but they have now been joined by another lecturer, making them four in the sculpture section. The history, transition, and development of the Sculpture programme revealed the various stages the programme has gone through to become what it is today.

4.3. The Sculpture programme structure (KNUST)

The structure of the programme is such that it caters to specific needs at every level of the programme. The requirements, when put together, match the overall mission of the sculpture section. The essence of this breakdown is to simplify it to match students' various stages of development, talents, interests, environment, media exploration, and studio practice (Jeffers and Fong, 2000). Lecturers believe that the programme's courses are sufficient because they contain everything necessary to develop students in accordance with the program's stated objectives. The numerous courses, such as drawing, modelling and casting, art history, and seminar presentations, have a consistent format. Students can expand on their existing knowledge, abilities, and competencies due to the consistency of these courses. In sculpting, the program emphasizes modern and contemporary art over traditional art. The programme is structured to permit students to take the minimum credit hours of 15 to the maximum credit hours of 18.

4.4. The Programme Structure of UEW (Sculpture)

According to Opoku Mensah, a lecturer at UEW who has been teaching sculpture subjects since 1992 when it was a Diploma programme, the sculpture programme was originally a two-credit hour course, but it is now a three-credit hour course. The sculpture lecturers were two at that time, but later on, one left the department. The department appointed two other lecturers into the department, and recently

they have added one other lecturer to the section. The courses introduce students to the basics of sculpture called foundation in their first year, where materials and different terms are introduced for them to explore. Again, it prepares sculpture students to become professional art teachers (Opoku Mensah, Personal Communication, 2021).

The undergraduate students' handbook on rules and regulations defines a programme of study as several courses that lead to the award of a degree. In contrast, a course denotes units of study within a discipline with a title, code number, stipulated contact hours, and credit weighting. Interviews with the lecturers unveiled that the unit's programme is formed of five main components that are:

a. General Education Courses: These are educational courses compulsorily offered by the University as part of its core purpose. The courses include Philosophy of Education, Introduction to Special Education, Principle and Practice of Teacher Education, Research Methods, Trends in Education, and School Management in Ghana.
b. Departmental Courses: Departmental courses are offered by all students in the Art Department irrespective of one's area of specialization. These are Basic Design, Basic Drawing, Figure Drawing, Curriculum Planning and Development in Art, History of Art, and Pictorial Composition in Drawings.
c. Subject Studies: This denotes an elective set of courses that provide students with areas of specialization. It is these subjects that differentiate one Section from another in the Department of Art Education. Examples of such courses under Sculpture include Foundation Studies in Sculpture, Production Techniques in Sculpture, Portraiture, Carving, Metal Casting, Murals in Sculpture, and Studio Research in Sculpture.
d. Some Professional Studies: These are courses selected by the Art Department to acquire adequate knowledge in other professional areas like business. The courses include Introduction to Information and Communication Technology, Marketing and Entrepreneurship, etc.
e. Student Internship Programme: This is a unique one-year Teaching Practice programme designed to develop and acquire teaching experience in any second-cycle institution in Ghana. This programme commenced in the 2012/2013 academic year and has been there till now.

It is within the Subject Studies component of the programme that the Sculpture is found. This unit has two parts: three-dimensional art areas (Sculpture, Ceramics, Leatherwork, Jewelry, and Basketry) and two-dimensional art areas (Picture Making, Graphic Design, and Textiles).

4.5. Objectives of the Programme at the Various Levels (UEW)

The structure of the programme is such that it caters to certain needs at every level. These needs, when put together, match the overall mission of the Sculpture Section. According to Jeffers and Fong (2000), the essence of this breakdown is to simplify it to match the students' various stages of development, talents, interests, environment, media exploration, and studio practice.

4.6. Development of Human Resources at KNUST

The University occasionally provides general staff development programs for lecturers. Training programs for new and old lecturers, seminars, conferences, and paper presentations are among them. According to Berko (2012), Professor Kwasi Andam, the late, used to organize training for all non-professional lecturers to bridge the gap between them and their colleagues with education certificates. However, the training did not last long when his term of office as chancellor ended, and the subsequent ones did not continue. According to Mr Opoku-Bonsu (personal communication, 18th August 2021), the present human resource challenge is the rising number of students entering the Department. He stated that student numbers have been increasing over the years and that the introduction of free SHS has caused the number to increase. He stated that the figure drawing class they handled used to be around 15 to 20 students, but now it is 150 students. According to Prof. Karî'kachä Seid'ou (personal communication, 18th August 2021), technology can handle some of the courses. When it comes to figure drawing specifically, lecturers must pay close attention to each student to ensure they are doing their best. He stated that it is not like lecturing, but rather paying attention to each individual to assess their psychological requirements and other factors, which means there should be an increase in lecturers as students are increasing. Dr Mrs Amenuke (Personal communication, 9th August 2021) expresses that the problem she has with the human resource is the lack of cleaners in the section. She further indicated that sculpture produces much waste from the way they work, and there is only one cleaner in the section, which is not enough for them. She said that the students' use of clay and wood does not mean they should be in a mess, but more cleaners should support the program's running.

4.6.1. Material Resources of the Sculpture Section of KNUST

Plate 1. *The front view of Sculpture Section KNUST*

Source: *Author's fieldwork, KNUST*

Plate 2. *Sculpture Section from the MFA block*

Source: *Author's fieldwork, KNUST*

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Plate 3. *Sculpture auditorium block*

Source: *Author's fieldwork, KNUST*

Plate 4. *Clay Pit (KNUST)*

Source: *Author's fieldwork, KNUST*

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Plate 5. *Sandblasting machine (KNUST)*

Source: *Author's fieldwork, KNUST*

The frontal view and the MFA block view of the KNUST Sculpture Section are shown in Plates 1, 2, and 3. Pavement blocks are laid on the compound's floor, and there is tap water for their practical works and other domestic use in the section. Some sculpture works are around the compound to complement or show interest in the section, and their washroom is close to the studio. The structure is built with cement blocks, aluminium roofing sheets, asbestos roofing sheets, wooden doors, and louver blades, and is fixed with a plywood ceiling.

They have a clay pit where they store their clay, but there is no gate to it, so people from all over come to take some without permission. There are two lecture halls in the section: one for the third-year class and one for the final-year class. It has one operational pug mill machine, which is used to prepare clay for the students. There is also one clamping and fastening tool in this section. Students have lockers where they

can store their materials, tools, and equipment. The section also has one operational welding machine for students to practice welding with, as well as other machines that are not in use due to repair or installation issues.

Plate 6. *Final year students' studio block*

Source: *Author's fieldwork, KNUST*

Interviews with the students and lecturers unveiled the current situation of the studio. The benches and the lockers are insufficient for the students. For these reasons, the first and second-year students are divided into groups so that each batch gets enough space for working in the studio. These groupings are done with the first and second-year students because they currently have the highest number of students due to the current reforms in the department. Currently, the second-year students who were supposed to be divided or select their preferred section or option are now together. This means that students are to study both Painting and Sculpture together to meet the current changes in the department.

Currently, the final years are using the former KNUST Senior High School space as their studio space. Students in their final year of Sculpture attend class with students in their final year of Painting to study and gain the same information, capabilities, and understanding that will improve them in their respective practices.

4.7. Development of human resources at UEW

The University holds general staff development programmes for all lecturers, including those in the Sculpture section, on occasion. Seminars, conferences, and paper presentations are available for both new and experienced lecturers.

4.7.1. Material resources of the Sculpture Units of UEW

Plate 7. *Front view of the Sculpture Section (UEW)*

Source: *Author's fieldwork, UEW*

Plate 8. *Compound view of the Sculpture section (UEW)*

Source: *Author's fieldwork, UEW*

Plates 14 and 15 depict the UEW Department of Art Education's sculpture section and classroom from the left front view and the compound view, respectively. A tree canopy planted in front of this cement block structure provides shade, and stones mark the section's entrance. Trees, in essence, protect the structure by providing shade and allowing fresh air to circulate throughout the rooms. Under the trees are beautifully sculpted statues. The building has been painted cream and has white wooden doors and louver blades. It was constructed with cement, asbestos sheets for the roof, and plywood ceilings. The lecture halls are too small for the students, but the section does not have enough. They use a single student desk in the lecture halls, which is relatively small for the students to use. Under the trees are beautifully sculpted statues. It has painted cream and white wooden doors and louver blades. It was constructed with cement, asbestos sheets for the roof, and plywood ceilings. The lecture halls are too small for the students, but the section does not have enough. They use a single student desk in the lecture halls, which is relatively small for the students to use. Again, they have a marker board in the lecture hall, but for the majority of their lectures, they use a projector. When the lead researcher visited the section, he noticed that the sculpture students had lectures, but they had to wait for a lecture room to become available before entering. In other cases, the sculpture lectures clashed with other classes, and students argued over who should use the space; eventually, a lecturer intervened to settle the dispute. They are also uneasy in their studio, which they share with the Picture Making students. Some of the paintings are displayed in the sculpture studio space, overshadowing the sculptures. According to the technician, most students who offer sculpture also offer picture making; as a result, they bring their painting works to the sculpture studio and leave them there. This contradicts Sidelnick's (1995) claim that art studios and workshops must be operated independently of lecture halls. According to Walter (1996), UEW must provide a spacious and well-furnished room or space for use as a studio so that lecturers can organize their repertoire of studio instructions. The section's observations revealed that both the lecture room and the studio space are inadequate for studio practice and learning.

There were not enough benches for students to work on; they used metal, but the section did not have clamps for them to use. The section has one welding machine, but it is kept in their storeroom since there is no appropriate voltage for it to be utilized; thus, when students use metals for their works, they either use binding wire or take it out to be welded. According to Oduro, a sculpture technician (Personal communication, 15th July 2021), the studio space is inadequate for the nature of the programme.

Plate 9. *The Sculpture Studio (UEW)*

Source: *Author's fieldwork, UEW*

Plate 10. *Second-year bust works (UEW)*

Source: *Author's fieldwork, UEW*

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Plate 11. *Studio benches at the sculpture section (UEW)*

Source: *Author's fieldwork, UEW*

Some equipment has become irreparable due to a lack of maintenance on the part of the University and an ever-increasing number of students. Among the items discovered were eight wooden benches, four concrete benches, one welding machine, six improvised benches, and a few classroom desks, tables, and chairs. Two hundred and forty-seven (247) sculpture students share and wait for others to finish their work before using these limited facilities. One of the section's lecturers, Opoku Mensah (personal communication, 19th July 2021), and students equally rated the Sculpture section's infrastructure and facilities as woefully inadequate. The section has not received any new infrastructure since UEW was elevated to university status. What was used before the institution became a university is still used today; however, interviews revealed that the section has grown by 70% in terms of student population today.

4.8. Teaching methodologies and habits students formed at KNUST and UEW Sculpture Section

Rohrer (2010) and Liu (2009) agree that a teacher may use more than one teaching-learning method in a single teaching-learning session, which is consistent with KNUST and UEW approaches to teaching Sculpture courses.

4.8.1. Observation Lecture One: Modeling in-the-Round

This is a year two modelling in-the-round lesson in which students are introduced to modelling in the round using clay and asked to demonstrate techniques in proportion to the human figure. The session lasted four hours.

i. **Teaching-learning processes**

Due to class size, the lecturer was forced to divide students into groups A and B with different contact schedules. The researcher successfully covered both groups A and B. The entire studio was set up with wooden benches, and students' clay was prepared and ready to use, as well as students' tools. Students were grouped into five each to use one bench, and those without a bench found their way of working on some rejected students' desks and other tables around. The studio was open, so there was plenty of ventilation, and three (3) teaching assistants were on hand to help students. As the students prepared, the lecturer walked around to demonstrate what he wanted them to do before giving them time to practice. When the timer ran out, the lecturer came around and moved through the room, observing and commenting on what the students were doing. Students were advised to double-check the proportions of the figure, and some were asked to carefully observe the model, so students circled the sample figure that the lecturer modelled to watch it again.

4.8.2. Habits Students formed

Students developed the habit of following their hearts and interests to model how they saw the lecturer's sample model. Students' works portrayed what they saw as an example, particularly the form and proportion. Some students struggled with the form and proportions. Students were once again unfamiliar with the modelling tools, and some of their armatures were inappropriate and inaccurate. The various parts were compared and related to one another as beginners. The majority of the students' work was poor; students were fumbling with it but were able to get the form. Students also learned modelling skills, which allowed them to observe the sample, calculate the proportions, and represent what they saw.

4.8.3. Observation Lecture One: Elements and Principles of Design

The year one lesson on Elements and Principles of Design enables students to explore diverse means of materials of their choice. This is done in the first year, first semester, and continues in the second semester.

i. **Teaching-learning processes**

During these lectures, the lecturer explained to the students what the course comprised at the start of the semester. The lecturer showed films and photographs of famous artists to motivate students to pursue their dreams. Students began by sketching and drawing the materials they would utilise during the semester. Students presented their materials and spoke to the class about what they intended to achieve, their concept, ideas, sketches, and even demonstrated their materials. Following the presentations, students were granted permission to continue working on their projects by manipulating their materials. Students were given the opportunity to work alone, and the professor came around once in a while to check on what they were doing and how they were doing it.

Plate 12. *First-year students' boxes work*

Source: *Author's fieldwork, KNUST*

doi.org/10.32388/2J6PNW

Plate 13. *First-year students' broom work*

Source: *Author's fieldwork, KNUST*

Plate 14. *First-year students' tin installation*

Source: *Author's fieldwork, KNUST*

doi.org/10.32388/2J6PNW

Plate 15. *first-year students' plastic spoons installation*

Source: *Author's fieldwork, KNUST*

i. **Habits Students Formed**

Students develop the skill of working on their materials by using their technique to manipulate the material with a concept or idea behind it. As students talk about their works, they develop the habit of intelligently talking about their artworks. Again, students formed the habit of manipulating materials aesthetically into their arts.

Finally, students' creative talents were strengthened due to the diverse repertory of lecturers' instructional techniques, allowing them to satisfy the aesthetic demands of the Sculpture program. Students become critical thinkers and problem solvers as a result of the teaching-learning process. As a result, the students are prepared to offer their unique skills to the country's growth.

4.8.4. Teaching methodologies and habits the students form at UEW

According to Rohrer (2010) and Liu (2009), in a single teaching-learning session, a teacher may use more than one teaching-learning process. Accordingly, the researcher observed methods of teaching Sculpture courses at UEW. The following sections explain what was seen during the Sculpture lectures. Among the

subjects observed were Foundation Studies in Sculpture (direct modelling), Portraiture (bust), Drawing, and Studio Research in Sculpture.

4.8.5. Observation Lecture One: Foundation Studies in Sculpture (direct modelling)

This level 100 lesson focused on direct modelling to introduce students to cement direct modelling and emphasize the importance of knowing how to use cement to model as part of their overall development. The class lasted three hours.

i. **Teaching and learning processes**

The course plan, which is presented to students, outlines what will be done throughout the semester. Before purchasing materials, students were required to sketch the project they would be working on for approval. Before beginning their direct modelling, they are given instructions on how to build their armature and submit it for approval. Following the preparation of the armature, the teaching assistant will show the procedures to the students in the lecturer's presence. Because this was a direct modelling activity, students were told to start with the base and wait for it to dry or firm before applying mortar to the armature to build the figure. Furthermore, students were given a time limit to complete the final project, but the lecturer came around to monitor what they were doing within that time frame. The lecturer then encouraged the students to view the exercise as an opportunity for personal development rather than punishment or simply fulfilling an academic requirement. After motivating the students, those who were slacking were encouraged to work hard.

Plate 16. *Students' Armatures Plate*

Source: *Author's fieldwork, UEW*

Plate 17. *Students practising their direct modelling*

Source: *Author's fieldwork, UEW*

doi.org/10.32388/2J6PNW

4.8.6. Habits Students Formed

The direct modelling exercise's learning techniques allowed students to practice their creative thinking and seeing skills through exploration, observation, and replication of what is thought and seen in the identification of creative situations. Students practice modelling with mortar and calculate how much cement and sand they can combine to make a model. Again, the experiential method gave the students the ability to portray what was intended.

5. Conclusions

This study sought to investigate Sculpture programmes and how students perceive them in both the KNUST sculpture section and the UEW sculpture option. The KNUST Sculpture Programme and UEW Art Education with Sculpture option had a similar origin and had gone through training and diploma certificates before becoming degree programmes. The KNUST Programme has been run for 59 years with an expansion of their studio space to the KNUST senior high school old site, while the UEW has been run for 27 years in the same infrastructure inherited from a college whose standard was far lower than that of a University. In terms of educational goals, there has been a modification in KNUST; initially, it was to produce self-reliant professional sculptors who would also satisfy the industrial requirement to meet the artistic needs of the nation. However, currently, the rationale of the BFA Fine Art and Curatorial Practice programme is to train artists and specialists in Fine Art Sculpture who want to build competence in professional practice and advance their intellectual horizon at foundational and professional levels in local, regional, and international spheres. Whereas the UEW Sculpture programme is producing professional art teachers to teach in pre-tertiary institutions, conduct research, and disseminate knowledge in Art Education, and contribute to Art Educational policy and development. Finally, both universities used field trips, perceptual approaches, motivation, demonstration, and experiential methods in their teaching-learning processes. All teaching techniques seen at both universities combined more than two of these instructional approach repertoires. Formal structural understanding, creative thinking, and observational capabilities, excellent sketching and experimenting with different materials, modelling tools, diversified learning methodologies, and students' ability in handling different media for casting and others were evidence of how students in both universities reflected such teaching methods. Therefore, the study recommends that UCC Sculpture sections should be reviewed since it has started a sculpture programme.

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