BENJAMIN ANSAH

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PROFILE

Benjamin Ansah is a lecturer and applied artist with a background in metal design and fabrication with the Department of Indigenous Art and Technology, KNUST. His work focuses on integrating STEAM (Science, Technology, Engineering, Arts, and Mathematics) education into hands-on learning experiences, particularly through innovative projects like the design and development of a cycle car and initiating a student collaboration between the Indigenous Art and technology and Automobile engineering in a localized electric vehicle for campus logistics. These projects are key to bridging the gap between creative arts and engineering to help students gain practical skills, solve real-world problems, and prepare for future opportunities.

Date of Birth:	22nd December, 1993
Address	G607 Coquette ST Amrahia New Town GD-204-5841
Sex:	Male
Nationality:	Ghanaian
Marital Status:	Single

EDUCATIONAL BACKGROUND AND QUALIFICATION

Institution: Kwame Nkrumah University of Science and Technology (KNUST)

Date: March, 2025

Program of Study: Doctor of Philosophy (Ph.D) Art Education

Institution: Kwame Nkrumah University of Science and Technology (KNUST)

Date: July, 2020

Program of Study: MPhil Integrated Art (Metal Fabrication Technology)

Institution: Kwame Nkrumah University of Science and Technology (KNUST)

Date: May 2016

Program of Study: Bachelor of Arts in Integrated Rural Art and Industry

Institution: Koforidua Senior High Technical School

Date: May 2012

Program of Study: Visual Art (WASSCE Certificate)

Institution: Association International School, Airport- Accra (BECE)

Date: 2008

WORK EXPERIENCE

September 1st to Date

Lecturer

Department of Indigenous Art and Technology, KNUST

November 2025

Part Time lecturer

Department of Indigenous Art and Technology, KNUST

January 2025 to Date

Paired Teaching

Department of Indigenous Art and Technology, KNUST

June 2022 – January 2025

Head of Operations

Northern sector

Genau Ghana Limited

August 2017-to 2024

Voluntary teaching Assistant

Department of Indigenous Art and Technology

Kwame Nkrumah University of Science and Technology, Kumasi.

August 2017-to 2018

Graduate Assistant

Kwame Nkrumah University of Science and Technology, Kumasi.

August 2016 - 2017

Teaching Assistant (KNUST)

National Service

January - March 2015

Industrial Internship

Accents and Art Limited

June – August 2014

Industrial Art Training

Accents and Art Limited

RESEARCH AREAS

STEAM EDUCATION

As a PhD candidate in Art Education at the Kwame Nkrumah University of Science and Technology (KNUST), I have dedicated my research to integrating Science, Technology, Engineering, Arts, and Mathematics (STEAM) education into hands on projects. My work has focused on how practical learning experiences, such as the design and fabrication of a STEAM Model Cycle Car, can enhance student competencies in problem solving, innovation, and teamwork. By merging theoretical knowledge with real world applications, I aim to bridge the gap between classroom learning and industry needs, equipping students with relevant skills for Ghana's evolving job market. My research into Cycle Car Technology has provided valuable insights into the integration of engineering, material science, and creative arts in vehicle fabrication. Key contributions include STEAM Competency Development. The research emphasizes creativity, technical knowledge, teamwork, and iterative problem solving, which are essential for modern technological advancements. My work underscores the importance of merging technical skills with artistic innovation to advance education, industry, and sustainable technology in Ghana. By developing a structured approach to STEAM learning, I aim to inspire the next generation of engineers, designers, and entrepreneurs.

METAL FABRICATION TECHNOLOGY AND MATERIAL INTEGRATION

With a strong background in metal fabrication, I have worked extensively with local metals, alloys, and composite materials to develop functional and artistic products. My expertise extends to Facilitation of Mobility Solutions. Through this initiative, I facilitated the acquisition of 8 bicycles, 1 motorcycle, and 32 scooters, promoting affordable and sustainable transportation options. Studied and improved traditional Ghanaian aluminum casting methods to find alternative use for these cooking utensils. Integrated leather crafting techniques into metal structures to produce hybrid material innovations in artistic and industrial designs.

INDOOR METAL WATER FOUNTAINS AND ARTISTIC METALWORK

Beyond engineering and transportation, I have a deep passion for metal fountain making and aquariums. My work in this field includes Designing Indoor Metal Water Fountains. Creating customized indoor fountains that blend aesthetic appeal with functional water circulation, promoting relaxation and eco-friendly environments.

Through my contributions to Cycle Car Technology, Material Integration, and Metal Fabrication, I seek to position KNUST as a leader in STEAM-based innovation, fostering practical education and industrial development in Ghana and beyond.

RESEARCH OUTPUT

Published articles in Journals

Ansah, B., Essel, H. B., Agyeman, K. K., & Afriyie Nyarko, F. K. (2026). Design, Development and Testing of a Science, Technology, Engineering, Art and Mathematics Education Localised Cycle Car Model: A Case in Kwame Nkrumah University of Science and Technology: Steam in Ghanaian higher education. Journal of Science and Technology (Ghana). https://doi.org/10.4314/just.vi.

Benjamin Ansah, K. K Agyeman (PhD), H. A Quaye and F. A Clement (2020). Ghanaian Local Aluminum Cast Utensil Forms for Fountain Production (IJISRT) ISSN NO: - 2456-2165.

Benjamin Ansah, K. K Agyeman (PhD), H. A Quaye and F. A Clement (2020). Water Fountain in Iron and Aluminum Cast Utensils (IJISRT)ISSN NO: - 2456-2165.

INTERNATIONAL CONFERENCE AND PROCEEDINGS PUBLISHED

- Conference Attended: the 21st International Conference on Private Higher Education in Africa organized by St. Mary's University in collaboration with African Union Commission, the Association of African Universities, the international network for higher education in Africa, the Ethiopian Ministry of education, the University of KwaZulu-Natal, and the UNESCO.

  Theme: "Sustainable Development in HE: Reality or Hype?", 9th- 11 May, 2023, Addis Ababa, Ethiopia. Paper Read: Benjamin Ansah. "STEAM EDUCATION IN GHANA: AN INTERDISCIPLINARY PROJECT-BASED APPROACH TO BIOMIMICRY AND CAD USING A CYCLE CAR AS A CASE.".

- Participated in the Masterclass Workshops, the 20th International Conference on Private Higher Education in Africa and the 3rd HEFAALA symposium held from the 25th to 29th of April 2022 at Addis Ababa, Ethiopia.

- Participated in the Doctoral Conference on Higher Education Studies from the 19th to 21st of April 2022 at the Kwame Nkrumah University of Science and Technology, Kumasi.

SKILLS (TOOLS AND HANDS- ON ABILITIES)

- 3D Software (Rhinoceros)
- CorelDRAW
- Adobe Illustrator
- Microsoft Office Suite
- 3D Rendering
- Metal Fabrication
- Metal Alloying
- Welding & Spraying
- Leather Works
- Art Painting & Basic Drawing

PROJECTS & PRACTICAL EXPERIENCE

- Construction of Bicycles, Motorcycles, and Cycle Cars
- Metal Fountain Production
- Aquarium Production

CREATIVE INTERESTS

- Fine Art Painting
- Music Theory, Orchestra Formation & Directing

ACHIEVEMENTS

- Appointed Secretary to the Department of Indigenous Art and Technology's 50th Anniversary planning committee.
- Vetted the end of first semester examination questions for the 2025/2026 Academic year of the department of Indigenous Art and Technology as a panel member.

- Completed a workshop organized by the KNUST E-learning centre on Instructional Design for Online Teaching covering all its four training modules (Online Students Success, Multimedia Tools Development for Online Facilitation, Instructor Presence and Moodle and Microsoft Teams), held between 13th January – 16th January, 2026.
- Reviewer for the International Journal of Research and Innovation in social Sciences.
- Facilitated in the first STEAM related collaboration between final year student from Indigenous Art and Technology and Automobile Engineering, KNUST in building a two-seater electric vehicle for campus logistics in five months. This was a conclusion to my Ph.D. work on STEAM in Ghanaian Higher Education.
- Constructed the first ever KNUST fully functioning cycle car highlighting STEAM in Ghanaian Higher Education and how to model STEAM related competencies of students through the cycle car's technology.
- Facilitated the construction of Bicycles and a Motorcycle at the Metal section of the department of Integrated Rural art and industry (KNUST). August 2016 to Date. In all 7 bicycles, 1 motorcycle, 37 manual scooters, a cycle car, 2 tricycle
  for children, 5 multipurpose wheelbarrows and a unicycle
- Participated in an industrial Art training Certificate course at the Art Institute with certificates in Welding, Woodwork and Spraying (Accents and Art Limited, Accra) June to August 2014.
- World Health Organization (WHO) training certificate on Health and Safety at the Art Institute. August 2014
- Involved in the construction and supervision of a Horse Wagon by the Metal section of the department of Integrated Rural Art and Industry. September 2015 to August 2016.

- Chief executive officer of Irrigo Fountains and Andante Peeps and Director for the Kumasi Symphony Orchestra, Kumasi.
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PERSONAL INTEREST

Research, Reading, Touring, Music, and Teaching

LANGUAGES

English, Twi, Ga