



# Curriculum Vitae

## Personal Data:

Dr. Boniface Yaayin  
University of Education, Winneba, Department of Chemistry Education, P.O. Box 25, Winneba,  
Ghana.  
+233245176857,  
byaayin@uew.edu.gh  
11th September, 1975  
Ghanaian.

## Areas of Expertise or Professional Skills:

- Science Education (Chemistry Education)
- Environmental Chemistry (Water Chemistry)
- Creativity, critical thinking and digital literacy
- Collaboration, leadership and innovativeness
- Good interpersonal relationship and strong communication

## Research Interest

- Chemistry Education, with a research focus on innovative, student-centred approaches that enhance understanding of chemical concepts, critical thinking, creativity, problem-solving, and lifelong learning.
- Sustainability in chemistry education.
- Environmental chemistry including water quality analysis.

## Professional Qualification(s):

<i>Rank</i>	<i>Supporting evidence</i>	<i>Period</i>
Senior Lecturer	Promotion letter	September 2025 to date
Lecturer	Ph.D. Certificate and change of status letter	May, 2022 to September, 2025
Assistant Lecturer	Appointment letter, M. Phil. Certificate, M.Sc. Certificate	July, 2021 to May, 2022
Senior Tutor	Promotion letter M. Phil. Certificate, M.Sc. Certificate	2019 to 2021

Tutor	Appointment letter M.Sc. Certificate and B.Ed Science Certificate	2016 to 2019
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**Professional Responsibilities:**

<i>Position</i>	<i>Office/Location</i>	<i>Period</i>
Postgraduate Coordinator	Chemistry Education Department – UEW	April 2024 to July, 2025
Faculty Coordinator, DRID	Faculty of Science Education/DRID -UEW	April 2024 to date
Lecturer	Chemistry Education Department, University of Education, Winneba	May 2022 to date
Assistant Lecturer	Chemistry Education Department, University of Education, Winneba	June 2021 to May, 2022
Academic Counsellor	Department of Chemistry Education, UEW	February 2023 to date
Senior Tutor	Department of Science Education, Tamale College of Education, Tamale	2019 to 2021
Head of Department	Department of Science Education, Tamale College of Education, Tamale	2017 to 2019
Tutor	Department of Science Education, Tamale College of Education, Tamale	2016 to 2019
Chemistry Teacher	Kanton Senior Secondary School, Tumu	2006 to 2007
Science Teacher	Roman Catholic Junior Secondary School, Yeji	1999 to 2002

## Other Professional Responsibilities

<i>Activity</i>	<i>Organiser</i>	<i>College</i>	<i>Period</i>
Monitoring of Colleges of Education End of Semester Examinations – Levels 200, 300 and 400 students	Institute for Teacher Education and Continuing Professional Development (ITECPD) – UEW	Sefwi Wiawso College of Education, Sefwi Wiawso	7 <sup>th</sup> October to 11 <sup>th</sup> October, 2024
Monitoring of Colleges of Education End of Semester Examinations – Level 200 students	Institute for Teacher Education and Continuing Professional Development (ITECPD) – UEW	Savannah College of Education, Daboya	11 <sup>th</sup> to 21 <sup>st</sup> December, 2023
Monitoring of Colleges of Education End of Semester Examinations – Level 300 students	ITECPD – UEW	Mampong Technical College of Education, Ashanti Mampong	6 <sup>th</sup> to 10 <sup>th</sup> November, 2023
Monitoring of Colleges of Education End of Semester Examinations – Level 100 students	ITECPD – UEW	Bagababa College of Education, Tamale	2 <sup>nd</sup> to 7 <sup>th</sup> October, 2023

## Education:

<i>Qualification/Certificate obtained</i>	<i>Name of Institution Attended</i>	<i>Date</i>
Ph.D in Science Education	University of Education, Winneba, Winneba	2018 to 2021
M. Phil in Science Education	University of Education, Winneba, Winneba	2014 to 2016
M.Sc. in Water Supply and Environmental Sanitation	Kwame Nkrumah University of Science and Technology, Kumasi	2007 to 2009
B.Ed. Science (Chemistry Option)	University of Cape Coast, Cape Coast	2002 to 2006
Teacher Certificate ‘A’	St. John Boscus Training College, Navrongo	1997 to 1999
Senior Secondary School Certificate	Lawra Senior Secondary School, Lawra	1992 to 1994

## Career History:

<i>Position/Title</i>	<i>Responsibilities</i>	<i>Name of Institution</i>	<i>Date</i>
Senior Lecturer	Engaged in lecturing, conducting research, supervising and examining regular undergraduate and post-graduate students' research work and engaging in community service	University of Education, Winneba	September, 2025 to date
Lecturer	Engaged in lecturing, conducting research, supervising and examining regular undergraduate and post-graduate students' research work and engaging in community service	University of Education, Winneba	May, 2022 to September 2025
Assistant Lecturer	Engaged in lecturing, conducted research and engaged in community service	University of Education, Winneba	2021 to 2022
Senior Tutor	Engaged in lecturing, conducted research and engaged in community service	Tamale College of Education	2019 to 2021
Head of Science Department	Organised departmental board meetings, allocated courses to members and discussed students' academic results as well as monitored academic progress at the departmental level. Prepared budgets and accounted on the expenditures. Attended academic board meetings and organized seminars to build the capacity of members in the department.	Tamale College of Education	2017 to 2019
Tutor	Engaged in lecturing, conducted research and engaged in community service	Tamale College of Education	2016 to 2019
Part-time Lecturer	Taught instructional methods in science; post-diploma students of Institute of Distance and e-Learning	University of Education, Winneba – Tamale Study Centre	2016 to 2018
Chemistry Teacher	Taught chemistry at Senior High School, served as science club patron and an assistant house master	Kanton Senior High School, Tumu	2006 to 2007
Science Teacher	Taught general science.	Roman Catholic JSS, Yeji	1999 to 2002

## **Publications, Research/Projects Conducted or Undertaken, Creative Works/Productions Produced:**

### **Peer-Reviewed Journal Articles:**

Dzakadzie, F., Birago, A., Samlafo, V. B., & **Yaayin, B.** (2025). Comparative assessment of heavy metals and health risks in *Elaeis guineensis* oils produced in Juaben Municipality, Ghana. *European Journal of Nutrition and Food Safety*, 17(11), 75-89

**Yaayin, B.** & Kamboke, M. (2025). Factors Influencing Students' Performance in Chemistry in Selected Senior High Schools. *Journal of Multidisciplinary Research and Development*, 2(2), 197 – 214

Hayford, K. A., **Yaayin, B.**, Dorman, E. K., Yakubu, M., & Asiamah, D. Y. (2025). Fostering positive attitudes in organic chemistry through digital tools and worksheets: A case study on hydrocarbon nomenclature. *International Journal of Scientific Research in Education*, 18(2), 245 – 256

**Yaayin, B.** (2025). Uniqueness of card game intervention in improving students' conceptual understanding of chemical names and their formulae. *European Journal of Education and Pedagogy*, 6(4), 55-63

**Yaayin, B.** & Hayford, A. K. (2025). Promoting students' conceptual understanding in drawing and naming of hydrocarbons using ChemDraw software with guided worksheets. *European Journal of Education and Pedagogy*, 6(3), 1-6

**Yaayin, B.**, Archie, P., & Dorsah, P. (2024). Utilising context-based learning to promote students' conceptual understanding and performance in organic chemistry. *European Journal of Research and Reflection in Educational Sciences*, 12(6), 28-44

Asiedu, G., **Yaayin, B.**, & Hanson, R. (2024). Effect of computer animations on senior high school students' academic achievements in rate of reactions. *Open Access Library Journal*, 11(11), 1-12. <https://doi.org/10.4236/oalib.1112276>

Addo, F. K. & **Yaayin, B.** (2024). Implementation of flipped classroom pedagogy to enhance students' performance and retention of electron configuration concepts. *African Journal of Chemical Education*, 14(3), 2-36

Nyagblormase, A. G., **Yaayin, B.**, & Hanson, R. (2023). The Effectiveness of flipped classroom in improving pre-service science teachers' performance in kinetic molecular theory of matter. *International Journal of Innovative Research & Development*, 12(6), 53-60

Baah, A., **Yaayin, B.**, & Hanson, R. (2023). Assessment of systemic insecticide residues in cocoa beans from some farms in the Western North region, Ghana. *International Journal of Multidisciplinary Research and Growth Evaluation*, 4(5), 1045-1052

Baah, A., **Yaayin, B.**, & Hanson, R. (2023). Multi residue analysis of systemic pesticide in cocoa beans from some farms in the Western North Region, Ghana. *Food and Public Health*, 13(1), 6-14

**Yaayin, B.,** Oppong, E. K., & Hanson, R. (2022). Enhancing pre-service teachers' understanding and attitudes toward naming and reactions of organic compounds using jigsaw approach. *European Journal of Open Education and E-learning Studies*, 7(2), 105 – 123

**Yaayin, B.,** Oppong, E. K., & Hanson, R. (2021). Efficacy of jigsaw model in improving pre-service teachers' performance in selected functional group organic compounds. *Science Education International*, 32(3), 191-196

Dorsah, P., & **Yaayin, B.** (2019). Altering students' misconceptions in electrochemistry using conceptual change texts. *International Journal of Innovative Research & Development*, 8(11), 33-44.

**Yaayin, B.** (2018). The effectiveness of problem-based learning approach to mole concept among students at Tamale College of Education. *Journal of Education and Practice*, 9 (12), 102-112.

**Yaayin, B.,** & Ayoberd, A. S. (2018). The influence of problem-based learning approach on students' perceptions and attitudes toward the mole concept in Tamale College of Education. *Africa Development and Resources Research Institute Journal*, 8(4).

**Professional Development:  
Training Sessions:**

<i>Course Title</i>	<i>Course Instructor (if desired)/Location</i>	<i>Period</i>
Training on the use of the Admission Module of the Enterprise Resource Planning System for 2025/2026 admissions	IT Directorate, University of Education, Winneba – Students' Centre	17 <sup>th</sup> June, 2025
Capacity building training on grantsmanship	The Directorate of Research, Innovation and Development (DRID), UEW – Nathaniel Pecku Conference Room, Pecku Block	16 <sup>th</sup> July, 2024
Training on Online Student Information System (OSIS) 2	Students' Centre, UEW	3 <sup>rd</sup> May, 2023
Training on how to use SPSS to analyse data in research	Institute for Educational Research and Innovation Studies (IERIS), UEW	22 <sup>nd</sup> March, 2023
Training on how to access eBooks and other library resources	Osagyefo Library, UEW	June, 2022
Training on how to use SPSS to analyse data in research	Tamale College of Education, Tamale	18 <sup>th</sup> to 19 <sup>th</sup> April, 2018

## Seminars and Workshops:

<i>Course Title</i>	<i>Organisers /Location</i>	<i>Period</i>
Second Technical Working Group Co-Creation Workshop - Development of Green Skills Competency Framework for Teachers – Ghana (Phase II)	Regional Teachers Initiative for Africa (RTIA) / National Council for Curriculum and Assessment, Literacy House, Accra, Ghana	4 <sup>th</sup> –8 <sup>th</sup> May, 2026
Grant proposal development and budgeting workshop	DRID, UEW North Campus Assembly Hall, UEW	28 <sup>th</sup> January, 2026
Capacity-building workshop for project implementors and the university community	Directorate of Research, Innovation and Development (DRID), UEW North Campus Assembly Hall, UEW	20 <sup>th</sup> January, 2026
Workshop on enhancing research visibility in UEW	University of Education, Winneba, Jophus Anamuah-Mensah Conference Centre (JAM)	11 <sup>th</sup> July, 2025
Workshop on Digitalisation and Green Transition in Higher Education Institutions.  I was one of the facilitators who presented on the topic “ <i>Smart Cities, Energy Optimisation and Sustainable Mobility</i> ”.	UEW Hosts Co-Creation Teacher Professional Development Project (TeProD) – Co-funded by the European Union.	9 <sup>th</sup> May, 2025
Workshop on policies and guidelines on postgraduate studies	School of Graduate Studies, University of Education, Winneba – North Assembly Hall	17 <sup>th</sup> February, 2025
Artificial Intelligence Seminar (The evolution of artificial intelligence in different fields: present and future opportunities)	Department of ICT Education, UEW – North Assembly Hall, UEW	3 <sup>rd</sup> April, 2024
Quality Assurance as Enhancing Efficiency and Effectiveness through Full Adoption of Digitalised Workspaces	The Global Quality Assurance Association – Virtual Attendance	8 <sup>th</sup> Feb. 2024

Equipping University of Education, Winneba Staff on Quality Assurance Issues in GTEC' New Standards and Norms	Quality Assurance Directorate in Collaboration with Division of Human Resource – Jophus Anamuah-Mensah Conference Centre, UEW	9 <sup>th</sup> May, 2023
Faculty Seminar - Professional Development	Faculty of Science Education, UEW, Lecture Hall 2	25 <sup>th</sup> January, 2023
Reflective practice-based learning Workshop	Centre for International Programmes (CIP), UEW– North Campus Assembly Hall	25 <sup>th</sup> May, 2022
Proposal writing for grants workshop	Directorate of Research, Innovation, and Development, UEW – North Campus Assembly Hall	1 <sup>st</sup> February, 2022
Faculty Retreat: Proposal writing for grants, thesis writing and research for publication as well as programmes and courses development	Elmina Beach Resort, organized by Faculty of Science Education, UEW	27 <sup>th</sup> to 28 <sup>th</sup> August, 2021
Faculty Seminar - Professional Development	Faculty of Science Education, UEW, Lecture Hall 2	14 <sup>th</sup> July, 2021
Professional Development Workshop for College Tutors, UKaid Project through the Transforming Teacher Education and Learning (T-TEL) in Ghana Programme	Tamale College of Education, Tamale	10 <sup>th</sup> – 11 <sup>th</sup> March, 2020
Workshop on how to conduct action research and research publication	Tamale College of Education, Tamale, Sackey Hall.	2019
Sexual harassment and how to respond to cases of sexual harassment, UKaid Project through the Transforming Teacher Education and Learning (T-TEL) in Ghana Programme	Modern City Hotel in Tamale	12 <sup>th</sup> – 13 <sup>th</sup> November, 2019
Workshop on how to write college strategic plan	Tamale College of Education, Tamale	April, 2017

**Conference(s):**

<i>Name of Conference</i>	<i>Location</i>	<i>Period</i>
ACS International conference on green chemistry – Organised by Department of Chemistry Education, UEW	University of Education, Winneba - North Assembly Hall	13 <sup>th</sup> February, 2026
Inter-University Conference for Doctoral Studies (IUCDS)– Organised by IUCDS	University of Education, Winneba - Jophus Anamoah-Mensah Conference Centre (JAM)	20 <sup>th</sup> – 22 <sup>nd</sup> Jan, 2026
<i>My role in the conference was a presentation on “Research Design/Approach/Paradigm, Using Advanced Mixed Research Methods”.</i>		
Sustainability Regenerative Agriculture International Conference – Promoting Regenerative Agriculture Curriculum and Practices as a feasible solution to attaining green economy and environmental sustainability – Organised by RIVIVER EU + Africa	Greenside Hotel, Arusha, Tanzania ( <i>In person attendance</i> )	13 <sup>th</sup> – 15 <sup>th</sup> October, 2025
25 <sup>th</sup> National Ghana Students’ Chemical Society (GSCS) Annual Conference – Organised by GSCS – Ghana under the theme “Safeguarding the Environment through Green Chemistry: The Role of Ghana Students’ Chemical Society”.	University of Education, Winneba – North Assembly Hall	17 <sup>th</sup> – 19 <sup>th</sup> July, 2025
8 <sup>th</sup> International Multi-Disciplinary Conference for postgraduate students – <i>Digital Transformation in Education: Global Challenges, Local Solutions</i>	Jophus Anamoah-Mensah Conference Centre, University of Education, Winneba ( <i>In person attendance</i> )	1 <sup>st</sup> - 2 <sup>nd</sup> August, 2024
Inter-university Conference for Doctoral Studies – <i>Promoting Staff Development through</i>	Jophus Anamoah-Mensah Conference Centre, University of Education, Winneba	17 <sup>th</sup> – 19 <sup>th</sup> January, 2023

<i>Collaborative Research and Quality Teaching in Education</i>	<i>(In person attendance)</i>	
15 <sup>th</sup> Annual Interdisciplinary Conference – <i>Contemporary Global Crises: Threats and Opportunities for Research and Academic Freedom</i>	Institute for Interdisciplinary Research, University for Development Studies, Tamale <i>(Virtual attendance)</i>	7 <sup>th</sup> – 8 <sup>th</sup> September, 2022
1 <sup>st</sup> Annual International Decolonizing Education Conference – <i>Revisiting Education Policy, Leadership and Curriculum Development Drawing on Local Knowledge and Current Trends</i>	Kwame Nkrumah University, Zambia <i>(Virtual attendance)</i>	11 <sup>th</sup> – 12 <sup>th</sup> August, 2022
Resilient Lagoon Network West Africa International Conference – <i>Discussion on current state of coastal lagoons in West Africa and opportunities to address the issues</i>	Students’ Centre Conference Hall, UEW <i>(In person attendance)</i>	4 <sup>th</sup> – 7 <sup>th</sup> July, 2022

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### **Curriculum Development:**

<i>Course or Instructional Material</i>	<i>Level at which course was taught</i>	<i>Period</i>
PSCC 825: Educational Statistics and Measurement	Post-graduate (M.Phil.) – Regular	July, 2022 to date
CHE 242: Introduction to Analytical Chemistry	Undergraduate (Level 200)	July, 2022 to date
EHS 114: Chemistry of Inorganic Compounds	Undergraduate (Level 100)	January, 2024 to date
PSCC 813: Modern Approaches to Research	Post-graduate (M.Phil.) – Regular	January, 2023 to date
PSC 353: Research Methods in Science Education	Undergraduate (Level 300)	January, 2023 to date
Post-internship	Undergraduate (Level 400) - Regular	July, 2022 to date

Pre-internship	Undergraduate (Level 300) - Regular	July, 2022 to date
Micro Teaching	Post-graduate (M. Ed.) – Sandwich	October – December, 2022
PSC 361: Curriculum Studies in Chemistry	Undergraduate (Level 300) - Regular	July – October, 2022
SCBD 502: Physical and Inorganic Chemistry	Post-graduate (M.Ed.) – CODEL	February, 2022 to date
SCBD 501A: Organic Chemistry	Post-graduate (M.Ed.) – CODEL	February, 2022 to date
CHE 111: Introduction to Inorganic Chemistry	Undergraduate (Level 100) - Regular	March – June, 2022

### Students' Development:

- Patron for Ghana Students' Chemical Society (GSCS) – UEW Chapter in the Department of Chemistry Education: 2024 to date
- Collaborated with other Senior Members in the Department as the patron of GSCS to lead the organisation of the 25<sup>th</sup> National Students' Annual Conference, 2025 hosted in UEW under the team "Safeguarding the Environment through Green Chemistry – The Role of Ghana Students' Chemical Society". 17<sup>th</sup> – 19<sup>th</sup> July, 2025
- Organised about 55 level 200 and level 300 students and teaching assistants from the Department of Chemistry Education, UEW to University of Ghana Chemistry Department to have hands-on and practical experience with their laboratory equipment (X-ray, NMR, GC-MS etc). The purpose of the education trip was to enhance students' hands-on application of the analytical, spectroscopy and synthetic methodological instruments used in the field of chemistry. It was a one-day trip which took place on 28<sup>th</sup> Feb. 2025
- Organised seminars to build the capacity of students in matters relating to GSCS and chemistry in general
- Collaborated with Ghana Students' Chemical Society (GSCS), UEW Chapter to assist the former patron to organise sixty-three (63) level 300 Chemistry Education students to Ghana Atomic Energy Commission and Nuguchi Medical Centre, University of Ghana for a field study (education trip). Students had the opportunity to learn chemistry in a more practical way. It was a one-day trip which took place on 15<sup>th</sup> July, 2022.

- Orientation of students' leadership of GSCS, UEW Chapter on budget and expenditure to guide the day-to-day operation of the society. Thirty-two (32) student leaders were in attendance. It took place on 17<sup>th</sup> February, 2023.

#### **Membership of Professional Association(s):**

<i>Name of Association</i>	<i>Position held</i>	<i>Period</i>
Ghana Chemical Society (GCS)	Member	2025 to date
American Chemical Society (ACS)	Member	2024 to date
Ghana Science Association (GSA)	Member	2022 to date
University Teacher Association of Ghana (UTAG)	Member	2021 to date

#### **Institutional Service:**

<i>Name of Committee(s) and/or Board (s)</i>	<i>Position or role</i>	<i>Period</i>
Faculty Graduate Board	Member	April 2024 to July, 2025
Faculty Examination Board	Member	April 2024 to July, 2025
Departmental Board	Member	July, 2021 to date
Departmental Staff Welfare Association, Department of Chemistry Education, UEW	Chairman	February, 2023 to date
Planning Committee for Certificate and Diploma Programmes in Herbal Medicine Education Programmes, Department of Chemistry Education, UEW	Member	October, 2022
Commonwealth of Learning Grant Proposal Writing Committee – Tamale College of Education, Tamale	Member	January, 2018 to January, 2020
Appointment and Promotion Committee – Tamale College of Education, Tamale	Member	August, 2019 to August, 2020
Gender and Sexual Harassment Committee – Tamale College of Education	Focal Person	2019 to 2021
Academic Board – Tamale College of Education	Member	2017 to 2019

## Community Service:

<i>Name of Institution/Organisation</i>	<i>Position(s) held (if applicable)</i>	<i>Nature of the service rendered</i>	<i>Period</i>
Regional Teacher Initiative for Africa (RTIA) Project – UEW	Researcher/Trainer of Trainees	- Using professional learning communities to integrate sustainability education into science and social studies lessons in Selected Junior High Schools in Winneba and Agona Nyakrom, Central Region, Ghana	2025 to 2026
Centre for School and Community Science and Technology Studies (SACOST), UEW	Trainer/Facilitator	Trained Teaching Assistants and M. Phil Chemistry Education students on “Exploring the Chemistry in Fabric making using plant-based dyes” to facilitate a Chemistry Festival programme for about 100 Junior High School pupils in Ekumfi, Central Region, Ghana.	1 <sup>st</sup> December, 2025
Deeper Christian Life Ministry, Ghana	Member of Board of Trustees	Representing the Campus Ministry at the National level to ensure students’ intellectual and spiritual development across all tertiary institutions in Ghana	2025 to date
Ghana Education Service (GES)/T-TEL, Central	Lead Facilitator	Capacity building meeting for over 100 teachers on	9 <sup>th</sup> April, 2025

Region (Swedru School of Business – Agona West Municipality)		the implementation of New SHS curriculum focusing on classroom lessons observation, internal assessment and lesson plan preparation	
College for Distance and e-Learning (CODeL), UEW	Workshop Facilitator	Facilitated a workshop for 2024/2025 post-graduate students on “Guidelines for writing dissertation/project work”.	29 <sup>th</sup> March, 2025
Ghana Education Service (GES)/T-TEL, Central Region (Swedru School of Business – Agona West Municipality)	Lead facilitator	Facilitated a school leadership meeting (including all Heads of Departments) on effective internal assessment of senior high school students based on the new senior high school curriculum and effective classroom teaching and learning modalities.	26 <sup>th</sup> March, 2025
Ghana Education Service (GES)/T-TEL, Central Region (Swedru School of Business, Ogyedom SHTS and Agona Namonwora Community SHS)	School Improvement Adviser (SIA)	Supporting Schools with the Development and Implementation of School Improvement Plans (SIPs), Professional Learning Communities (PLCs), Lesson Observations and Engagement with School Management through Leadership Training	July 2024 to December, 2025
Adabokrom Community Day SHS - Ghana Education Service, Bia East District, Western North Region	Lead Facilitator	Effective strategies in preparing for West African Senior Secondary Certificate Examination (WASSCE) SHS 3 final year students	5 <sup>th</sup> July, 2024

Ghana Education Service, Bia East District, Western North Region	Lead Facilitator	Capacity building workshop for basic school science teachers – Innovative ways of teaching science at the basic school level	4 <sup>th</sup> July, 2024
Department of Chemistry Education and Department of Integrated Science Education, UEW in collaboration with American Chemical Society (ACS)	Project Team Member (Facilitator)	Organised Chemistry Festival for four selected Junior High Schools (188 pupils) in the Effutu Municipality under the theme “Unmasking Chemistry in Indigenous Activities”.	24 <sup>th</sup> November, 2022
Department of Chemistry Education and Department of Integrated Science Education, UEW in collaboration with American Chemical Society (ACS)	Project Team Member (Facilitator)	Trained Science, Technology, Engineering and Mathematics (STEM) teachers in four rural Basic Schools on unmasking chemistry concepts in indigenous activities in the Effutu Municipality – Winneba	17 <sup>th</sup> November, 2022
Department of Chemistry Education and Department of Integrated Science Education, UEW in collaboration with American Chemical Society (ACS) – Chemistry Festival	Project Team Member (Facilitator)	Educated and sensitized community members within the Effutu Municipality through Radio Windy Bay, 98.3 MHz on “Unmasking chemistry concepts in indigenous activities” to teach basic school pupils in rural communities	16 <sup>th</sup> November, 2022
Tamale College of Education in collaboration with Commonwealth of Learning, Canada	Project Team Member (Facilitator)	4 – Day Training Workshop on Problem- based Learning (PBL) and e-learning for selected Basic School Science Teachers in Tamale Metropolis and Sagnarigu Municipality in Northern Region of Ghana.	17 <sup>th</sup> - 20 <sup>th</sup> December, 2019

## **Thesis / Project Work Supervision and Examination:**

### **External Assessor of M. Phil Theses, CK Tadam University of Technology and Applied Sciences**

1. Using Collaborative Teaching Mode to Improve Performance of Student's in the Teaching and Learning of Mendelian Genetics in Selected Schools in Bolgatanga: By Lucas Adama – October, 2023
2. A Comparative Study of Activity-Based Strategy and Lecture Method in Teaching Photosynthesis in Integrated Science: By Moses A-Engbinge Alemya – October, 2023
3. Technological, Pedagogical and Content Knowledge (TPACK) of Junior High School Integrated Science Teachers on Writing and Balancing of Chemical Equations: By Bernard Sabil Nyebaken – January, 2024
4. Effect of context-based instruction on senior high school students' performance and perception in rate of chemical reaction: By Robert Agbeko – April, 2024
5. Instructional Resource Availability and Utilisation and their Relationship with Senior High School Learner Performance in Chemistry Practical Lessons: By Abdul Razak Abubakar – May, 2024
6. Impact of community factors on learning attitudes and performance of girls in science in senior high schools in the Upper East Region of Ghana: By Daniel Bayivere – May, 2024
7. Effects of Physics Education Technology (PhET) on Students' Academic Performance and Interest in Molecular Geometry in Chemistry: By Abdul Rafiu, Shaibu – August, 2024
8. Preparedness and Perception of Science Teachers and Students on E-Learning during Covid 19 in Bolgatanga Municipality: By Roland Asapaka – October, 2024
9. Using Problem-Based Learning Method in Teaching and Learning of Classification of Living Organisms at Bunkpurugu Senior High Technical School: By Bright Mensah – December, 2024
10. The New 4-Years B. ED Curriculum of Colleges of Education and the Instructional Practices, Core Skills and Attituded of Science Tutors in Colleges of Education in Northern Ghana: By Salia Abdul-Wahab – May, 2025

### **Internal Assessor of M. Phil Theses, University of Education, Winneba**

1. Using computer animations to enhance senior high school students' academic achievements in rate of reactions: By Gloria Asiedu – August, 2022
2. Promoting quality education through effective supervision in public JHS in Ghana: A case study of six JHS in the Banda District of the Bono Region of Ghana: By Kwadwo Solomon Okrah – February, 2023

- Effect of computer-assisted instructions on students' performance in acids, bases and salts: By Emmanuel Kwame Denu – March, 2023
- Effects of Jigsaw cooperative learning strategy on chemistry students' understanding of rate of chemical reaction: By Godwin Selassie Teyie – June, 2023
- Cooperative learning strategy: Towards effective teaching and learning of chemical bonding: By Mershack Osei Agyemang – August, 2023
- Improving students, performance in hybridization and molecular shapes using computerized animations and models: By Desmond Collins Gyamfi – September, 2023
- Exploring the Use of Problem-Based Learning Approach on Students' Conceptual Understanding of Gas Laws: By Margaret Kusi – May, 2025

#### **Supervised M. Phil and M.Ed. Theses, University of Education, Winneba**

- Effects of criss-cross method on Junior High School pupils' performance and attitudes towards writing of chemical formulae: By Isaac Baidoo – December, 2022
- Effects of flipped classroom learning on students' performance, retention and perception towards electron configuration: By Francis Kwadjo Addo – January, 2024
- Effect of cooperative learning approach on senior high school students' performance and perceptions towards balancing of chemical equations: By Evans Kwame Ludu – August, 2024
- Assessment of groundwater quality and potential health risk in Anfoega, North Dayi District, Volta Region, Ghana: By Prosper Adzibolosu – April, 2024
- Effects of ChemDraw software and guided worksheets on students' performance and attitudes towards drawing and naming of hydrocarbons: By Kenneth Afedzi Hayford – January, 2025
- Effect of micro-lab and traditional lab approaches on students' process skills, performance and retention in inorganic qualitative analysis: By Enoch Kojo Dorman – March, 2025

#### **Grants, Honours, Awards, Prizes or Professional Recognition and other Key Accomplishments:**

<i>Name/Type of Award</i>	<i>Awarding Institution or Organisation</i>	<i>Period</i>
Chemistry Festival Grant	American Chemical Society (ACS)	15 <sup>th</sup> August, 2022
Commonwealth of Learning Project Grant	Commonwealth of Learning – Canadian Government	December, 2019

Second Best Teacher	Kanton Senior Secondary School, Tumu	2007
Best Science Student	St. John Boscos Training College, Navrongo	1999

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**Referees:**

**Prof. Emmanuel K. Oppong**

Department of Chemistry Education

University of Education, Winneba.

Mobile: +233244803191

Email: [emmakyameoppong@yahoo.com](mailto:emmakyameoppong@yahoo.com)

**Prof. Ruby Hanson**

Department of Chemistry Education.

University of Education, Winneba

Mobile: +233208126299, +233244728690

Email: [maameruby@yahoo.com](mailto:maameruby@yahoo.com)