



Curriculum Vitae

Personal Address

P. O. Box 82
Winneba
Ghana

Personal Information

Name: Nelly Adjoa Sakyi-Hagan (Mrs.)
Date of Birth: 12th March, 1979
Nationality: Ghanaian
Religion: Christianity
Marital Status: Married
Number of Children: Four (4)
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Education:

Qualification/Certificate obtained	Name of Institution Attended	Date
PhD (Science Education)	University of Education, Winneba (UEW)	August, 2023
PhD Exchange Programme	University of Jyvaskyla, Finland	January – March, 2022
M.Phil. (Science Education)	University of Education, Winneba	July, 2013
B.Ed. (Science Education)	University of Education, Winneba	July, 2008
3-Year Post Secondary (Cert 'A')	Komenda Training College, Komenda	June, 2000
Senior Secondary School Certificate Examination	Mfantsiman Girls' Secondary School, Saltpond	November, 1996
Basic Education Certificate Examination	Specialists' Training College Junior High School, Winneba	May, 1993

Area(s) of expertise:

Science (Physics) Education

STEM /Gender Education

Career History:

Position/Title	Name of Institution	Dates
Lecturer	University of Education, Winneba	February, 2022 - Date
Assistant Lecturer	University of Education, Winneba	February, 2018 – January, 2022
Physics/Integrated Science Teacher House Mistress Member, STMIE Clinic Committee	Winneba Senior High School, Winneba	September, 2008 – February, 2018
General Science & Mathematics Teacher	Methodist A & C Junior High School, Winneba	September, 2000 – August, 2004

Chapter(s) in Book(s)

1. **Sakyi-Hagan, N.**, Quansah, E. R., & Hanson, R. (2019). The Microscale Science Equipment as a Conceptual and Attitudinal Changing Tool towards Sustainable Development. In J. A. Opara (Ed.), *Outlook on Human Capacity Building and Development: A Handbook of Research in Honour of Professor Ibrahim Njodi* (pp. 222-231). Maiduguri, Nigeria: University of Maiduguri Press.

Peer-Reviewed Journal Articles

1. **Sakyi-Hagan, N.**, and Hanson, R. (2022). Gender differences in Performance in Integrated Science among Pre-Service Science Teachers: A Case of a University in Ghana. *East African Journal of Education and Social Sciences* 3(6)1-7
<https://doi.org/10.46606/eajess2022v03i06.0231>
2. Antwi, V., **Sakyi – Hagan, N.**, Addo -Wuver, F. and Asare, B. (2021) Effect of Practical Work on Physics Learning Effectiveness: A Case of a Senior High School in Ghana. *East African Journal of Education and Social Sciences* 3(2), 43-55
<https://doi.org/10.46606/eajess2021v02i03.0102>
3. Antwi, V., Addo -Wuver, F. and **Sakyi – Hagan, N.** (2020) How do our Students Understand Newton’s Third Law of Motion? A study in a Ghanaian University Context. *Science Education International* 31(4), 410-417 <https://doi.org/10.33828/sei.v31.i4.10>

4. **Sakyi - Hagan, N.** and Hanson, R. (2020), Interactive instructional approaches to teaching Integrated Science and their effect on students' performance: A study in a Ghanaian University Context. *African Perspectives of Research in Teaching and Learning* 4(1), 60-75 <https://www.ul.ac.za/aportal/index.php?Entity=Volume%204%202020>
5. Twumasi-Appiah, E., Antwi, V., Anderson, I. K., and **Sakyi-Hagan, N.** (2020) Comparative Effect of Cooperative Learning on Students' Performance in Mechanics Concepts: A Case of Two Secondary Schools in Berekum Municipality, Ghana. *East African Journal of Education and Social Sciences* 1(1), 139 – 151 <https://doi.org/10.46606/eajess2020v01i01.0015>
6. Quansah, E. R., **Sakyi-Hagan, N.**, and Essiam, C. (2019) Challenges Affecting the Teaching and Learning of Integrated Science in Rural Junior High Schools in Ghana. *Science Education International* 30(4), 329-333 <https://doi.org/10.33828/sei.v30.i4.10>
7. Hanson, R., and **Sakyi-Hagan, N.** (2019) Understanding Teacher Trainees' Reasoning Patterns about the Formation and Description of Chemical Compounds. *Science Education International* 30(2), 105-115 <https://doi.org/10.33828/sei.v30.i2.4>
8. Antwi, V., Anderson, I. K., and **Sakyi-Hagan, N.** (2015) Effect of Computer Assisted Instruction on Students' Interests and Attitudes in Learning Electricity and Magnetism in a Ghanaian Senior High School. *International Journal of Innovative Research and Development. (Online)* 4 (4), 302 – 315. <http://www.ijird.com>
9. Antwi, V., Anderson, I. K., and **Sakyi-Hagan, N.** (2014) Effect of Computer Assisted Instruction on Students' Performance in some selected concepts in Electricity and Magnetism: A Study at Winneba Senior High School in Ghana. *Advances in Scientific and Technological Research (ASTR). (Online)* 1 (4), 161 – 176. <http://www.projournals.org/ASTR>
10. **Sakyi-Hagan, N.** (2012) Elementary School Science Teachers' Understanding of The Concept of the Earth's Rotation. *Journal of Educational and Social Research (JESR). (Online)* 2 (9), 91- 99.

Reviewed Articles for International Journals

1. Journal of STEM Education: Innovations and Research
<https://www.jstem.org/jstem/index.php/JSTEM> "Dissemination of Growth Mindset Principles and Attitudes in the Division of Science and Mathematics at a Liberal Arts College"

2. Science Education International <http://www.icasonline.net/journal/index.php/sei> How is Middle School Students' Scientific Reasoning Ability Associated with Gender and Learning Environment?
3. Science Education International <http://www.icasonline.net/journal/index.php/sei> Enhancing science process skills acquisition in chemistry among secondary school students through context-based learning

Professional Development

Course title	Course Instructor(s)	Location	Period
Research Writing in the Social Sciences	INASP/AuthorAid	Online Verification Code: LgCz9D5X6X	6 th April – 25 th May, 2020
Professional Development Conference: 1. What quality research involves 2. Briefs from Appointments and Promotions Board and Management 3. Offering support in our professional development agenda	1. Professor Aloy Ejiogu 2. Rev. Fr. Professor Anthony Afful - Broni 3. Professor Ruby Hanson	University of Education, Winneba	5 th November, 2019

Webinars, Seminars and Workshops attended:

Title	Location	Period
Health and Health-Related Sustainable Development Goals (HHSDGs) Think Tank in Ghana	Fiesta Royale Hotel, Accra	3 rd June, 2024
1 st ASAF Co-Speakers' Meeting	Meikles Hotel in Harare, Zimbabwe	25 th – 26 th November, 2023
African Academic Night (AAN) and the African Research Day (ARD)	University of Turku, Finland	27 th – 28 th October, 2023
Enhancing the Capacities of ASAF Members in Volunteering, Professional Development and Raising Awareness among Stakeholders on EU-Funded Higher Education Mobility Programs	Elmina Beach Resort, Elmina	4 th – 6 th October, 2023

Co-Creating Climate Futures Workshop	MIT Media Lab in Boston, Massachusetts, USA	14 th – 16 th July, 2023
3rd Annual General Forum of African Students and Alumni Forum (ASAF)	Movenpick Hotel and Residences, Nairobi, Kenya	2 nd - 4 th June, 2023
2nd Annual General Forum of African Students and Alumni Forum (ASAF)	Ramada Resort by Wyndam, Dar es Salaam, Tanzania	15 th – 20 th June, 2022
Institute of Educational Research and Innovative Studies (IERIS), UEW, Faculty Retreat Workshop	Anomabo Beach Resort, Anomabo	5 th – 9 th October, 2021
Faculty of Science Education, UEW Workshop Retreat	Elmina Beach Resort, Elmina	26 th – 29 th August, 2021
International Women’s Day Summit	JAM Conference Centre	10 th March, 2021
Learning Management System (Moodle) Orientation for All Lecturers	ICT Lab (Main)	4th-8th January, 2021
OWSD-Ghana Chapter-CSIR Branch Webinar Series	Online via zoom	13 th – 27 th October, 2020
Workshop on Publishing and Research Ethics	Faculty of Science Education, University of Education, Winneba	3 rd February, 2020
Proposal Writing Workshop	University of Education, Winneba	25 th - 26th September 2019
Editorial Perspectives on Science & Technology Journals – Taylor & Francis Group	Online - Taylor & Francis Reviewer Training Network	24th August, 2021
Excellence in Peer Review: How to be an effective peer reviewer – Peer Review Systems Webinars	Online - Taylor & Francis Reviewer Training Network	16th July, 2021
Module Writers’ Training Workshop on writing Open, Distance and e-learning Modules	WADOMA Hotel, Kumasi	31 st March - 6 th April, 2019
Workshop on Ethical Use of Information	Faculty of Science Education, University of Education, Winneba	9 th January, 2019
Current trends in research funding for the social sciences and humanities	University of Education, Winneba	19 th - 21 st June, 2018
Publishing research articles: theory and practice	University of Education, Winneba	19 th - 21 st June, 2018
Writing, Critiquing and Publishing a Research Article	University of Education, Winneba	19 th - 21 st June, 2018
ICT and Multimedia Tools for Effective	ITECPD - University of	18 th June, 2018

Teaching and Learning	Education, Winneba	
SMART Software Application in Teaching and Learning.	Winneba Secondary School, Winneba	25 th January, 2013
Online Courseware Development Programme Using MOODLE Learning Management System.	University of Education, Winneba	August, 2012

Conferences attended:

1. **Sakyi-Hagan, N.** and Anor, C. E. (2023) 19th International Conference of Women in Engineering and Science (ICWES19), 3rd – 6th September, 2023 at Aotea Centre, New Zealand. *Paper 1 presented: Rural Girls in STEM Education: Perceptions, Participation and Future Career.*
Paper 2 presented: Promoting girls' engagement in STEM through a maiden science fair in a community in Ghana
2. **Sakyi-Hagan, N.** and Anor, C. E. (2023) Gordon Research Conference on Visualization in Science and Education, 16th – 21st July, 2023 at Bates College in Lewiston, Maine, United States.
Poster presented: Local gin production as an indigenous knowledge learning tool in the study of the concept of distillation
3. Inter-University Conference for Doctoral Studies, 17th – 19th January, 2023, University of Education, Winneba, Ghana.
4. Akayuure, P. and **Sakyi – Hagan, N.** (2022) International Conference on Teaching, Assessment and Learning in the Digital Age, 1st – 3rd December, 2022, Durban, South Africa.
Paper presented: Academic Integrity of Assessment Results in the Digital Space: The UEW Experience
5. CLD 3rd Annual International Conference (Virtual) October 14-15, 2022.
6. OWSD 6th General Assembly and International Conference (virtual) by The Organization for Women in Science for the Developing World, OWSD 18th – 19th November, 2021.
7. **Sakyi-Hagan, N.** and Hanson, R. (2021). 18th International Conference of Women Engineers and Scientists (ICWES 18) hosted online by the University of Warwick, UK,

- 1st – 3rd September, 2021. *Paper presented: Gender differences in performance in integrated science among pre service secondary school teachers in Ghana*
8. 5th Young African Women Congress, 2021, under the theme AFRICA: The Empowerment We Want at the Faculty of Law Auditorium, University of Ghana, Accra from 29th August – 2nd September, 2021
 9. 5th International Multidisciplinary Conference for Postgraduate Students – UEW, 15th – 16th July, 2021.
 10. Motherhood and Career Retention in STEMM Conference: Systemic barriers and actionable solutions, hosted online by Mothers in Science Organization on May 5th, 2021.
 11. International Conference on Arts and Science (Webinar Conference) hosted by The School of Creative Arts (SCA), Centre for Research in Culture and Creative Arts (CeRCCA) in collaboration with Institute for Educational Research and Innovation Studies (IERIS) and Faculty of Science Education, 26th - 27th January 2021.
 12. Hanson, R., **Sakyi-Hagan, N.**, and Quansah, E. R. (2019). Clute International Academic Conference on Education - Science Track (ISEC) from 4th – 8th August, 2019, at the James New York NoMad 22 East 29th Street New York, NY 10016 USA.
Paper presented: the microscale science equipment as a conceptual change and cost-saving tool towards sustainable development
 13. **Sakyi-Hagan, N.** and Hanson, R. (2019). International Network of Women Engineers and Scientists, Africa Regional Network (INWES_ARN) Conference on 26th -28th June, 2019 at the University of Uyo, Akwa Ibom, Nigeria. *Paper presented: interactive instructional approaches to teaching and their effect on students' performance: a case study of teacher trainees in Ghana*
 14. **Sakyi-Hagan, N.** (2012). ASSR/AATL International Conference on Agriculture, Science and Engineering, River State University of Science and Technology, Port Harcourt, Nigeria, 3rd – 7th September, 2012. *Paper presented: elementary school science teachers' understanding of the concept of the earth's rotation*

Curriculum Development (Projects/Workshops Facilitated):

Course	Location	Period
Laissez-Passer of the Erasmus Generation Foundation Project 2023, “Empowering Girls through Menstrual Hygiene Awareness” in Ghana	SLT7 Block, South Campus, UEW https://www.uew.edu.gh/news/winner-2023-laissez-passer-global-contest-launches-project-uew	28 th May, 2024
Project Member: American Chemical Society (ACS) Chemistry Festival for students of Gomoa Central District	Pomadze Basic Schools, Gomoa Pomadze	10 th November, 2023
Project Member: American Chemical Society (ACS) Chemistry Festival for students of Kwanyako Catholic Basic School	Ekumfi Fruits and Juices Company Limited, Ekumfi	17 th October, 2023
Project Lead: American Chemical Society (ACS) Chemistry Festival for students of Potsin T. I. Ahmadiya SHS	Potsin T. I. Ahmadiya SHS	21 st September, 2023
Project Member: American Chemical Society (ACS) Chemistry Festival for students of Kwanyako Anglican Basic School	Ghana Water Company Limited, Agona Kwanyako	4 th July, 2023
American Chemical Society (ACS) Chemistry Festival for Selected Schools in Effutu Municipality.	Methodist Rafiki Satellite Village, Gyahadze-Winneba https://www.uew.edu.gh/news/uew-holds-chemistry-festival-selected-schools-municipality	24 th November, 2022
Facilitator: Training workshop to appraise Science, Technology, Engineering and Mathematics (STEM) teachers in selected basic schools of the Effutu Municipality.	Methodist Rafiki Satellite Village, Gyahadze-Winneba https://www.uew.edu.gh/news/uew-lecturers-update-effutu-municipality-stem-teachers	17 th November, 2022
Facilitator: Lagos State University Africa Centre of Excellence for Innovative and Transformative STEM Education (LASU-ACEITSE) Joint Committee Ghana workshop on Global best practices in the teaching and learning of STEM: Enhancing Ghanaian Science teachers’ capacity	Students Centre – UEW https://www.uew.edu.gh/news/uew-hosts-workshop-global-best-practices-teaching-stem	10 th – 14 th October, 2022
Facilitator: Science fair for girls in Effutu Municipality, Ghana	Presbyterian and St. John Anglican schools in Winneba https://www.uew.edu.gh/news/uew-female-fse-lecturers-and-effutu-ges-hold-maiden-science-fair-girls	5 th & 9 th August, 2022

Skills Training Workshop for STEM Teachers in Abuakwa North Municipal	St. Paul Senior High Technical School, Akyem Tafo	4 th – 6 th August, 2021
Facilitator: Evaluation training programme for Science, Mathematics and Technical Skills teachers in Effutu Municipality	North Assembly Hall, UEW	7 th – 10 th June, 2021
Facilitator: Training programme for STEM teachers in Gomoa West district.	Gomoa Senior High Technical School, Gomoa Dawurampong https://www.uew.edu.gh/news/gomoa-west-district-sign-mou-uew	28 th – 29 th November, 2019
Facilitator: Training programme for Science and Mathematics teachers in Effutu Municipality	SACOST Centre - IERIS, UEW https://www.uew.edu.gh/news/sacost-trains-mathematics-and-science-teachers-effutu-municipality	12 th – 13 th March, 2019

Student Development:

- Academic Counsellor 2018/2019 Academic Year (Level 200) Integrated Science Department
- Academic Counsellor 2019/2020 Academic Year (Level 200) Integrated Science Department
- Academic Counsellor 2020/2021 Academic Year (Level 200) Integrated Science Department
- Academic Counsellor 2022/2023 Academic Year (Level 300) Integrated Science Department

Membership of Professional Association(s):

- Member, University Teachers Association of Ghana (UTAG) 2018-date
- Member, International Network of Women Engineers and Scientists (INWES) 2019-date
- Member, Organization for Women in Science for the Developing World (OWSD) 2019-date
- Board of Director, INWES 2021-2023
- Chair, Awards Committee (INWES) 2021-2023
- Mentor, Africademics Scholarship Programme 2022-date
- Member, African Students and Alumni Forum (ASAF) 2022-date
- Member, Ghana Science Association (GSA) 2022-date
- Member, American Chemical Society (ACS) 2022-date
- International Academic Forum (IAFOR) 2022-date
- International Union of Pure and Applied Physics (IUPAP) 2021-date

Institutional Service:

- Departmental Physics Practical Coordinator 2022- date
- Departmental Strategic Planning Coordinator 2022- date

- Departmental Examinations Moderation Committee Secretary 2022 - date
- Maths and Science Summer camp Planning Committee Member 2020 – date
- Re-accreditation of Integrated Science Programmes Team member 2019
- SACOST – IERIS, UEW Facilitator 2018 – date

Community Service:

- Member, Science Fair for Girls in Effutu Municipal Team 2022 - date
- St. Paul Methodist Church, Winneba, Society Steward (Finance) 2017 - 2021
- St. Paul Methodist Church, Winneba, Leader 2012 - 2021
- St. Paul Methodist Church, Winneba, Women’s Fellowship President 2013 - 2016
- Local Organizing Committee Member (Inauguration of Winneba North Circuit) 2020 - 2022
- Connexional Conference Planning Committee Member -Methodist Church, Ghana
2021- 2022

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

1. Won 3000 Euros (3000€) for the Laissez-Passer of the Erasmus Generation Foundation Project 2023 with the project, “Empowering Girls through Menstrual Hygiene Awareness” in Ghana <https://garagerasmus.org/the-laissez-passer-of-the-erasmus-generation-2023-goes-to-a-social-innovation-project-in-ghana/>
2. Was adjudged the most outstanding Lecturer of the Department of Integrated Science Education for the 2021/2022 and 2022/2023 academic years.
3. Led a team to win Fourteen Thousand, Nine hundred and five Euros (€ 14,905.00) to conduct a pilot project in Ghana for the African Students and Alumni Forum (ASAF) in October, 2023 <https://www.asaf.africa/activities/news/detail/building-capacities-in-volunteerism-and-eu-funded-projects-asaf-ghana-connects-members-and-stakeholders>
4. Won the Gordon Research Conferences (GRC) Carl Storm International Diversity (CSID) Award of One thousand, two hundred and fifty dollars (1250) for registration and One thousand, five hundred dollars (1500) for travel to attend the 2023 Visualization in Science and Education in Boston, USA from 14th to 21st July, 2023.
5. Won six (6) grants of either one thousand, five hundred dollars (1500) or three thousand dollars (3000) each from the American Chemical Society (ACS) to organise

chemistry/science festivals for children between the ages of 11 and 15 years, to boost their interest in STEM from May, 2022 to May, 2023.

6. Received 2 full travel grants from the European Union to attend the ASAF Annual General Forum (AGF) both in Dar es Salaam, Tanzania in 2022 and Nairobi, Kenya in 2023
7. Received a travel grant of seven hundred and fifty dollars (750) from the International Union of Pure and Applied Physics (IUPAP) Women in Physics Travel Grant Program to attend the 2019 Clute International Academic Conferences in New York, New York, US from August 4 – August 8th, 2019.
8. Received a travel grant of seven hundred dollars (700) from the International Union of Pure and Applied Physics (IUPAP) Women in Physics Travel Grant Program to attend the International Conference on Agriculture, Science and Engineering, ICASE in Omoku, Nigeria, from September 3 to September 7, 2012.
9. Won the UEW/Carnegie Scholarship of one thousand five hundred dollars for Female Graduate Students of the University of Education, Winneba in May, 2012.

Referees:

Prof. Victor Antwi

Pro-Vice Chancellor
University of Education, Winneba
Winneba
Contact Number: 0509800342

Prof. Ruby Hanson

Senior Lecturer, Department of Chemistry Education
University of Education, Winneba
Winneba
Contact Number: 0208126299/0244728690

Dr. Charles Kwesi Koomson

Head of Department
Department of Integrated Science Education
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Contact Number: 0244586953

15th June, 2024