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**Current Position:** Professor of Science Education

**Area of Specialization:** Science Education. Special foci on investigating/analyzing scientific literacy (SL) among students from diverse backgrounds, understanding of selected scientific concepts/phenomena, integration of STEM concepts (Science, Technology, Engineering and Mathematics) and multicultural science education contexts in science curriculum materials, contemporary science teaching/learning strategies (particularly scientific inquiry, engineering design, modeling, and computer simulations), and examining how ICTs (Information and Communication Technologies) are integrated in science education settings.

## I. ACADEMIC DEGREES:

2006: Ed.D. Illinois State University, Illinois, USA.  
Science Education.  
2001: MSc. University of the Witwatersrand, Johannesburg, South Africa.  
Science Education.  
1998: BSc. University of Zambia, Lusaka, Zambia.  
Biology and Chemistry.

## II. PROFESSIONAL WORK EXPERIENCE:

2023-Present: **Professor of Science Education**, School of Education and Human Development, University of Virginia, Charlottesville, Virginia, USA.  
2013-2023: **Associate Professor of Science Education**, School of Education and Human Development, University of Virginia, Charlottesville, Virginia, USA.  
2012-2013: **Biology Teacher Education Coordinator**, College of Education, Southern Illinois University, Carbondale, Illinois, USA.  
2006-2013: **Senior Lecturer of Science Education**. Department of Curriculum & Instruction. Southern Illinois University. Carbondale, Illinois, USA.  
2003-2006: **Science Education Administrative and Graduate Research Assistant**, Centre for Mathematics, Science, and Technology Education (CeMaSTE), Illinois State University, Normal, Illinois, USA.  
2002-2003: **Graduate Research Assistant**, Chemistry Department, Illinois State University, Normal, Illinois, USA.  
Fall 2001: **Visiting Science Education Scholar**, Department of Mathematics & Science Education, Northern College (currently the School of Education at University of Aberdeen), Aberdeen, Scotland, UK.  
1999-2002: **Science Education Lecturer**, Department of Mathematics & Science Education, University of Zambia, Lusaka, Zambia.  
1999-2000: **Graduate Teaching assistant** for 1<sup>st</sup> year biology labs, Department of Animal, Plant & Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa.  
1997-1998: **Biology & Chemistry High School Teacher**, Chikuni Girls High School, Zambia.  
Fall 1996: **Biology & Chemistry Student Teacher**, Mazabuka Girls High School, Zambia.

**III. SCHORLASHIP/RESEARCH WORK:**

Research interests: Scientific Literacy and Concept Understanding, Inquiry-Based Instruction Approaches (modeling, computer simulations, science and engineering processes/practices and design), and Sense-Making Science Learning Contexts (multicultural science content/contexts, and Information Communication Technologies [ICTs]).

**Journal Articles (Referred):**

(\* denotes a graduate student author)

1. Mumba, F., Rutt, A\*. & **Chabalengula, V.M.** (2022). Representation of Science and Engineering Practices and Design Skills in Engineering Design-Integrated Science Units Developed by Pre-service Teachers. *International Journal of Science and Mathematics Education*. <https://doi.org/10.1007/s10763-022-10266-6>
2. Miles, E\*. , Mumba, F. & **Chabalengula, V.M.** (2019). Elementary Education In- service Teachers' Familiarity, Interest, Conceptual Knowledge and Performance on Science Process Skills. *Journal of STEM Teacher Education*, 53(2), Article 3. <https://ir.library.illinoisstate.edu/jste/vol53/iss2/3>
3. Mumba, F., Pottmeyer, L.O\*. & **Chabalengula, V.M.** (2019). Analysis of Articles in *American Biology Teacher* for Essential Features of Inquiry Representation. *Research in Science Education* (2019). <https://doi.org/10.1007/s11165-019-09906-9>
4. Banda, A\*. , Mumba, F. & **Chabalengula, V. M.** (2018) Junior High School Pre-service Science Teachers' Familiarity, Conceptual Understanding and Interest in Electrochemistry. *African Journal of Research in Mathematics, Science and Technology Education*, 22(2), 149-161, DOI: 10.1080/18117295.2018.1475282
5. **Chabalengula, V. M.** & Mumba, F. (2017) Engineering design skills coverage in K-12 engineering program curriculum materials in the USA. *International Journal of Science Education*, 39(16), 2209-2225, DOI: 10.1080/09500693.2017.1367862.
6. **Chabalengula, V. M.**, Bendjemil, S. A\*. , Mumba, F. & Chiu, J. L. (2017). Nature and Extent of Science and Engineering Practices Coverage in K- 12 Engineering Curriculum Materials. *International Journal of Engineering Education*, 33(1B), 308-320. Special Issue on Current Trends in K-12 Engineering Education.
7. Banda, A\*. , Mumba, F. & **Chabalengula, V. M.** (2017). Mufulira Secondary School Pupils' Familiarity, Interest and Conceptual Understanding of Selected Chemistry Concepts. *Zambia Journal of Teacher Professional Growth (ZJTPG)*, 3(1), 19-30.
8. **Chabalengula, V. M.**, Fateen, R\*. , Mumba, F. & Ochs, L. K\*. (2016). Effect of Inquiry-Based Computer Simulation Modeling on Pre-service Teachers' Understanding of Homeostasis and their Perceptions of Design Features. *Journal of Computers in Mathematics and Science Teaching*, 35(3), 225-248.
9. Mumba, F., Banda, A\*. & **Chabalengula, V.M.** (2015). Chemistry Teachers' perceived benefits and challenges of inquiry-based instruction in Chemistry Classrooms. *Science Education International*, 26(2), 180-194.

10. Mumba, F., Mbewe, S\*. & **Chabalengula, V. M.** (2015). Elementary School Teachers' Familiarity, Conceptual Knowledge, and Interest in Light. *International Journal of Science Education* 37(2), 185-209.
11. Banda, A. \*, Mumba, F. & **Chabalengula, V. M.** (2014). Zambian pre-service chemistry teachers' views on chemistry education goals and challenges for achieving them in schools. *Science Educator*, 23(1), 56-64.
12. Mumba, F., **Chabalengula, V.M.** & Banda, A\*. (2014). Comparing male and female preservice teachers' understanding of the particulate nature of matter. *Journal of Baltic Science Education*, 13(6), 821- 827.
13. **Chabalengula V.M.** & Mumba, F. (2012). Inquiry-Based Science Education: A Scenario on Zambia's High School Science Curriculum. *Science Education International*, 23(4), 307-327. Special Issue on Inquiry Based Science Education. <https://files.eric.ed.gov/fulltext/EJ1001626.pdf>
14. **Chabalengula, V. M.**, Mumba, F. & Mbewe, S\*. (2012). How pre-service teachers understand and perform science process skills. *Eurasia Journal of Mathematics, Science and Technology Education*, 8(3), 167-176.
15. **Chabalengula, V. M.** & Mumba, F. (2012). Promoting Biological Knowledge Generation Using Model-Based Inquiry Instruction. *International Journal of Biology Education*, 2(1), Article 2.
16. **Chabalengula, V. M.**, Sanders, M. & Mumba, F. (2012). Diagnosing students' understanding of energy and its related concepts in biological context. *International Journal of Science and Mathematics Education*, 10(2), 241-266.
17. Mbewe, S., Mumba, F., Wright, M., Henson, H. & **Chabalengula, V. M.** (2011). Assessing mathematics and science teachers' reformed teaching through examination of inquiry-based pedagogical practices. *Journal of Research and Practice of International Cooperation in Science, Mathematics and Technology Education*, 3(1), 20-34.
18. **Chabalengula, V.M.**, Mumba, F. & Chitiyo, J\*. (2011). American Elementary Education Preservice Teachers' Attitudes towards Biotechnology Processes. *International Journal of Environmental and Science Education*, 6(4), 341-357.
19. Banda, A\*., Mumba, F., **Chabalengula, V. M.** & Mbewe, S\*. (2011). Teachers' understanding of the particulate nature of matter: The case of Zambian pre- service science teachers. *Asia Pacific Forum on Science Learning and Teaching*, 12(2), Article 4.
20. **Chabalengula V.M.**, Mumba, F. & Chitiyo, J\*. (2011). Elementary Education Pre- service Teachers' Understanding of Biotechnology and its related processes. *Biochemistry and Molecular Biology Education*, 39(4): 321-325.
21. **Chabalengula, V.M.**, Mumba, F., Zhu, M., Banda, A. \*, Mbewe, S\*. & Miles, E\*. (2011). Science teachers' familiarity of and interest in computer simulations, animations, visualization, modeling and virtual reality. In M. Koehler & P. Mishra (Eds.), *Society for Information Technology & Teacher Education (SITTE)* (pp. 2075-2077). Chesapeake, VA: AACE.

22. Mumba, F., **Chabalengula, V. M.** & Mejia, W\*. (2010). Resident scientists' instructional practice and their perceived benefits and difficulties of inquiry in schools. *Journal of Baltic Science Education*, 9(3):187-195.
23. Mbewe, S\*, **Chabalengula, V. M.** & Mumba, F. (2010). Pre-service teachers' familiarity, interest and conceptual understanding of science process skills. In Lamanauskas, V. (Ed.). *Problems of Education in the 21st Century: Recent Issues in Science and Technology Education*, Vol. 22, 76-86. Scientific Methodical Center, Lithuania.
24. Mumba, F., Mbewe, S\*, Sasser, S\*, **Chabalengula, V. M.** & Wilson-Miles, E\*. (2009). Resident scientists' curriculum and instructional decisions for high school classrooms. In Lamanauskas, V. (Ed.). *Problems of Education in the 21st Century: Recent Issues in Science and Technology Education*, Vol. 17, 125-133. Scientific Methodical Center, Lithuania.
25. **Chabalengula, V. M.**, Mumba, F., Hunter, W. & Wilson, E\*. (2009). A model for assessing students' science process skills during science lab work. In Lamanauskas, V. (Ed.). *Problems of Education in the 21st Century: Recent Issues in Science and Technology Education*, Vol. 11, 28-36. Scientific Methodical Center, Lithuania.
26. Mumba, F., **Chabalengula, V.M.**, Wilson, E.N\*, Carver, J. & Hunter, W.F.J. (2009). Resident scientists' conceptions of science teaching. In Lamanauskas, V. (Ed.). *Problems of Education in the 21st Century: Recent Issues in Science and Technology Education*, Vol. 11, 129-138. Scientific Methodical Center, Lithuania.
27. Mumba, F., Wilson, E\*, **Chabalengula, V. M.**, Mejia, W\*. & Mbewe, S\*. (2009). Elementary education pre-service teachers' attitudes towards graphs. *Journal of Baltic Science Education*, 8(3), 172-181.
28. Mumba, F., Carver, J., **Chabalengula, V.M.** & Hunter, W. (2009). Chemistry teaching fellows' understanding of the nature of scientific theories and laws. *Journal of Baltic Science Education*, 8(1): 15-21.
29. **Chabalengula, V. M.**, Mumba, F., Lorsbach, A. & Moore, C. (2008). Curriculum and instructional validity of the scientific literacy themes covered in Zambian high school biology curriculum. *International Journal of Environmental & Science Education*, 3(4), 207-220.
30. Bacchus, C., Mumba, F., **Chabalengula, V.M.** & Bassoppo-Moyo, T. C. (2007). Hypermedia versus Traditional classroom instruction: A look at the research designs, methods, and theoretical perspectives. *International Journal of Instructional Media*, 34(3), 255-265.
31. Mumba, F., **Chabalengula, V.M.** & Wise, K (2007). Analysis of new Zambian high school physics syllabus and practical examinations for levels of inquiry and inquiry skills. *Eurasia Journal of Mathematics, Science and Technology Education*, 3(3), 213-220.
32. Mumba, F., **Chabalengula, V.M.** & Hunter, W. (2007). Inquiry levels and skills in Zambian high school chemistry syllabus, textbooks and practical examinations. *Journal of Baltic Science Education*, 6(2), 50-57.
33. Mumba, F., **Chabalengula, V.M.**, Moore, C. & Hunter, W. (2007). Mathematics and science teaching fellows' instructional planning for K-12 classrooms. *Science Educator*, 16(2), 38- 43.

34. Mumba, F., **Chabalengula, V. M.** & Bassoppo-Moyo, T. C. (2006). Ethical and educational justification for computer-based instructions: a case of simulations in science teaching. *International Journal of Instructional Media*, 33 (4), 405-414.
35. Mumba, F., **Chabalengula, V. M.** & Hunter, W. (2006). A quantitative analysis of Zambian high school physics textbooks, syllabus and examinations for scientific literacy themes. *Journal of Baltic Science Education*, 2(10), 70-76.
36. Moussa T., Mumba, F., **Chabalengula, V. M.** & Mtegha, D. (2003). Teaching and learning in Africa before, during, and after colonialism. *The Sophist's Bane*, 2(1), 10-18.
37. Mumba F., **Chabalengula, V. M.**, Hunter, W. J. F., Moore, C. J., Grogg, J., Thornton, C. & Plantholt, M. (2003). An exploration of the content and nature of reflective practices of graduate teaching fellows in a school-university partnership project. *The Chemical Educator*, 8(6), 404-412.
38. Haambokoma, C., **Chabalengula, V. M.** & Murdock, J. (2003). Feasibility of providing training in teaching through distance mode to untrained graduate teachers of mathematics and science. In B. Putsoa, M. Dlamini, B. Dlamini & V. Kelly (Eds.), *Southern African Research in Mathematics, Science, and Technology Education*. University of Swaziland Press, Mbabane, Swaziland (Pp 621-629).
39. **Chabalengula, V. M.** & Sanders, M. (2001). First-year university medical students' ideas about energy and energy related concepts. In B. Putsoa, M. Dlamini, B. Dlamini & V. Kelly (Eds.), *Southern African Research in Mathematics, Science, and Technology Education*. Eduardo Mondlane University Press, Maputo, Mozambique. (Pp 224-233).

### **Book Chapters (Edited):**

1. **Chabalengula V.M.** (current proposal, to be published in 2024). Found a Home: Intersection between Zambian sociocultural and Mainstream Western Science Perspectives about natural phenomena. In: Atwater M.M. & Garvin, B. (Eds.), *A Place called Home in Science Education*. Springer.
2. **Chabalengula, V.M.** & Banda, A. (2023). ICT Integration in Zambian High School STEM Education. In: Ramnarain, U. and Ndlovu, M, (Eds.), *Information and Communications Technology in STEM Education: An African perspective*. Routledge Publishers, London. Chapter 2. <https://doi.org/10.4324/9781003279310>
3. **Chabalengula V.M.** & Mumba F. (2022). Multicultural Science Content and Contexts in Zambian Science Curriculum Materials. In: Atwater M.M. (Ed.), *International Handbook of Research on Multicultural Science Education*. Chapter 28. Springer, Cham. ISSN 2197-1951. [https://doi.org/10.1007/978-3-030-37743-4\\_28-1](https://doi.org/10.1007/978-3-030-37743-4_28-1)
4. **Chabalengula, V. M.** & Mumba F. (2020). Science and engineering practices coverage in science practical work: Analysis of Zambia's Integrated Science Curriculum materials. In Umesh Ramnarain (Ed.), *School Science Practical Work in Africa: Experiences and Challenges*. (Chapter 8). Routledge, New York. <https://www.routledge.com/School-Science-Practical-Work-in-Africa-Experiences-and-Challenges/Ramnarain/p/book/9780367202798>

5. Mumba, F., Ochs, L\*, Rutt, A\* & **Chabalengula, V. M.** (2018). Constructing Explanatory Arguments Based on Evidence Gathered While Investigating Natural Phenomena in a Methods Course for Middle School Teachers. In Jack Rhoton (Ed.), *Three-Dimensional Preparation of Teachers for Instruction*. (Chapter 12, pp 99-106). Arlington, Virginia. USA: NSTA Press.
6. **Chabalengula, V. M.** & Mumba, F. (2012). Understanding Energy Conservation: Intersection between the Biological and Everyday Life Contexts. In Azni Zain Ahmed (Ed.), *Energy Conservation*, (Chapter 3, pp. 73-92). ISBN 978-953-51- 0829-0. DOI: 10.5772/51872.
7. Bassoppo-Moyo, T. C. & **Chabalengula, V.M.** (2005). Designing appropriate learning materials for distance education in sub-Sahara Africa using the Teamwrite approach. In Adel Al-Bataineh & Mohamed A. Nur-Awaleh (Eds.), *International Education Systems and Contemporary Education Reforms*. (Pp 155- 173). Lanham, Maryland, USA: University Press of America.

### **Grant Projects:**

(PI= Principal Investigator; Co-PI = Cooperating Principal Investigator)

1. **Co-PI:** (with Dr. Larry Richards- Mechanical Engineering, Dr. Frackson Mumba-Science Education, Dr. Reid Bailey-Systems Engineering, and Dr. Alexis Rutt-Science Education). *University of Virginia Robert Noyce Teacher Scholarship Program Phase II*. Requested amount \$1.2 Million. Award # 2243516. *Funded by the National Science Foundation*. (Duration: Aug 2023 - Aug 2028).
2. **Co-PI:** (***UVa School of Education Collaborators:*** Dr. Frackson Mumba-Associate Professor of Science Education, Dr. Ji Hoon Ryo-Assistant Professor of Quantitative Methods in Education, Dr. Jennie Chiu-Assistant Professor of STEM education. ***Witwatersrand University, South Africa Collaborators:*** Dr. Elizabeth Mavhunga-Senior Lecturer of Science Education, Dr. Marissa Rollnick-Professor of Science Education, Dr Craig Pournara-Director of Marang Centre for Mathematics and Science Education. ***Zambian Universities Collaborators:*** Dr. Simeon Mbewe-Senior Lecturer, Department of Mathematics and Science Education, University of Zambia; Dr. Asiana Banda, Senior Lecturer, Department of Mathematics and Science Education, Copperbelt University). *Curry Global Engagement: -Partnership for Research, and Teacher Training in South Africa & Zambia*. Amount: \$196,500. UVA's Curry School of Education Initiative Grants. Not funded. (Duration May 2017-May 2020).
3. **PI:** (Co-PIs at UVA: Larry Richards-Professor of Mechanical & Aerospace Engineering, Jennifer Chiu-Assistant Professor of Instructional Technology, Frackson Mumba-Associate Professor of Science Education, Ji Hoo Ryoo-Assistant Professor of Quantitative Methods in Education). Development and Validation of Engineering Design Integrated Science Classroom Observation Protocol. Requested Amount: \$10,000. *Funded by Curry Research & Development Fund*. (Duration: July 2017 - July 2018).
4. **Co-PI:** (with Dr. Frackson Mumba-Science Education, Dr. Robert Tai-Science Education, Dr. Jennifer Chiu-Engineering Education, and Dr. Larry Richards- Mechanical Engineering). *University of Virginia Robert Noyce Scholarship and Stipend Program*. \$1.5 Million. Award # 1439858. *Funded by the National Science Foundation*. (Duration: Aug 2014 - Aug 2019).

5. Co-PI: (with Edward Murphy-Astronomy Department, Frackson Mumba-Science Education, Victor Luftig-Department of English). *Partnership for Achievement in Science in Southwest Virginia (PASS-VA)*. Amount \$150,000. Funded by the State Council of Higher Education for Virginia (SCHEV). (Duration: July 1, 2015 - September 30, 2016).
6. PI: (with Dr. Reid Bailey-Systems Engineering; Dr. Frackson Mumba-Science Education; and Dr. Jennifer Chiu-Engineering Education). *Engineering Design Integration in K-12 Science Education: Development, Implementation and Evaluation of an Integrated Instructional Model*. Proposal submitted to NSF-REE (National Science Foundation's Research in Engineering Education Program). NSF Proposal #: 1531610. Requested amount \$295,800. Not Funded. (Duration: July 2015 - June 2018).
7. PI: Developing and Evaluating an Instructional Model for Integrating Science and Engineering Design in K-12 Science Classrooms. Curry School Research and Development Fund at the University of Virginia. One year funding for \$10,000. Funded by Curry Research & Development Fund. (Duration: January 2014 - May 2015).
8. Co-PI: (with Dr. Manuel Lerdau-Environmental Sciences; Dr. Frackson Mumba- Science Education; Dr. Paul Freedman-Politics; and Dr. Stewart Gamage-UVA Provost's office). Morven Farm Sustainability Project (MFSP): Role of Science Education on Ecological Issues in Africa. Proposal submitted to the University of Virginia Provost's Global Research Programs of Distinction. Stage 1, one year funding for \$100,000. Not Funded. (Duration: January 2014-December 2014).
9. Co-PI: (with Dr. Frackson Mumba - Science/Chemistry Education; Dr. Julie Dunston - Engineering; and Dr. Garthy Crosby - Professor of Electrical Engineering Technology). Southern Illinois Material Science and Engineering for Teachers (SIMSET). Submitted to Illinois State Board of Education. Not Funded. (Duration: 2013-2014).
10. Co-PI: (with Prof. Gary Kinsel - Chemistry & Biochemistry; Dr. Frackson Mumba - Science Education; Dr. Punit Kohli - Chemistry & Biochemistry; Dr. Xingmao Ma - Civil Engineering; and Dr. Shaikh Ahmed - Electrical & Computer Engineering). Southern Illinois Partnership for Improved Science Achievement through Nanotechnology (Si-Nanotech). Submitted to Illinois State Board of Education, \$175,000. Not Funded. (Duration: 2011- 2013).
11. Project Evaluator: Illinois State University's Graduate / ISU Institutes for Elementary School Mathematics and Science Teachers: A Partnership for Developing Teacher Leaders (ISBE STEM grant # 533009170 ISBE 12-4936-80). \$1 Million. Collected and analyzed data to evaluate project goals and outcomes. Funded by Illinois State Board of Education (ISBE). (Duration: 2008-2013).
12. Project Coordinator: Science, Mathematics & Action Research for Teachers (SMART) program cohort 2. (PIs Dr. Mary Wright - Mathematics; Dr. Frackson Mumba - Science Education; Dr. Lingguo Bu - Mathematics Education & Mr. Harvey Henson - Geology). Mathematics and Science Partnership: Implementation proposal for cohort 2. \$1.5 Million. Funded by Illinois State Board of Education (ISBE), (Duration: 2007-2013).
13. Research Associate: Southern Illinois Partnership for Achievement in Mathematics and Science (SIPAMS). (PIs Dr. Mary Wright - Mathematics; Dr. Frackson Mumba - Science Education; Dr. Lingguo Bu - Mathematics Education; Mr. Harvey Henson, Geology & Dr. William Hunter - Chemistry, Illinois State University). \$900,000. Funded by Illinois Board of Higher Education (IBHE), (Duration: 2010-2013).

14. Research Associate: Partnership for Improved Achievement in Science through Computational Science (PIASCS). (PIs Dr. Mengxia Zhu - Computer Science; Dr. Mesfin Tsige - Physics; Dr. Frackson Mumba - Science Education; Dr. Kevin Wise, Science Education & Dr. Shaikh Ahmed - Electrical and computer Engineering). \$530,000. Funded by Illinois State Board of Education (ISBE), (Duration: 2009- 2012).
15. Graduate Research Assistant: Mind Project. Took part in the writing of the grant proposal for National Institute of Health (NIH) funding at the Centre for Mathematics, Science, and Technology (CeMaST) at Illinois State University, USA. Funded by NIH (Fall 2004).
16. Graduate Research Assistant: Impacts of GIS and GPS on Students' ability to do Inquiry- Based Learning Activities. Took part in articulating the problem statement, literature review, and the evaluation portion of the grant proposal for NSF funding at the Centre for Mathematics, Science, and Technology (CeMaST) at Illinois State University, USA. (Summer 2004).
17. Graduate Research Assistant: SIMaST program (Students Integrating Mathematics, Science, and Technology) at the Centre for Mathematics, Science, and Technology (CeMaST) at Illinois State University, Normal, Illinois, USA. I developed research instruments; collected and analyzed data; and wrote evaluation portion on the impact of the SIMaST program on middle and high school students' careers in science, mathematics, and technology. Funded by Illinois State Board of Education (ISBE). (Duration of my involvement: Fall 2003 - Summer 2005).
18. Graduate Research Assistant: Teach.Chem grant at Illinois State University, USA. Department of Chemistry. A project aimed at addressing pedagogical and content knowledge of middle and high school science teachers in central Illinois. Funded by Illinois State Board of Education (ISBE). (Duration of my involvement: Fall 2002-Summer 2003).
19. Co-PI: (with Chris Haambokoma, Science education; Bentry Nkhata, Mathematics Education; and Curriculum Development Center). A joint project between the University of Zambia (Department of Mathematics and Science Education) and JICA. Nationwide Identification of Difficult Topics in Biology among High School Students and Teachers in Zambia. £12,000 British Pounds. Funded by Japan International Cooperation Agency (JICA). (Duration: 2001-2003).
20. Co-PI: (with Bentry Nkhata, Math Education; Chris Haambokoma, Science Education; Simeon Mbewe, Science Education). A Joint project between the University of Zambia and Northern College in Scotland. Investigated the Feasibility of offering Distance Education to Science and Mathematics High School Teachers in Zambia. £10,000 British Pounds. Funded by British Council. (Duration: 2001- 2002).

### **International & National Conference Presentations (Peer-Reviewed):**

(\* denotes a graduate student author)

1. **Chabalengula, V. M.** & Nicolaidis, I\*. (2022). *Students' Science Learning Interests and Formal Biology Curriculum Emphases: Special Reference to Viruses in the COVID Pandemic Era*. Paper presentation at the National Association of Research in Science Teaching (NARST). Vancouver, British Columbia, Canada. March 27-30, 2022. Paper ID: Q-1007045-9713.
2. **Chabalengula, V.M.** (2021). *Multicultural Science Content and Contexts in Zambian Biology Curriculum Materials*. Paper presentation at the National Association of Research in Science Teaching (NARST). April 7-10, 2021. Paper ID: Q-1007045-8963.



3. Mumba, F., Pottmeyer, L\*., Rutt, A\*. & **Chabalengula, V.M.** (2019). *Pre-Service Science Teachers' Implementation of Engineering Design Integrated Science Units in Schools*. Paper presentation at the 13<sup>th</sup> Conference of the European Science Education Research Association (ESERA). Bologna, Italy. August 26-30, 2019.
4. **Chabalengula, V.M.** & Mumba, F. (2019). *Science and Engineering Practices Coverage in Zambia's Integrated Science Curriculum*. Paper presentation at the National Association of Research in Science Teaching (NARST). Baltimore, Maryland, USA. March 31 - April 3, 2019. Paper ID: Q-1007045-7832.
5. Mumba, F. & **Chabalengula, V. M.** (2019). *Impact of PBGI instruction on Chemistry Teaching Assistants' Pedagogical Orientations and Conceptions of Science Teaching*. Paper presentation at the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE). University of KwaZulu-Natal, Durban, South Africa. January 15-17, 2019. Paper ID: 9997.
6. **Chabalengula, V. M.** & Mumba, F. (2018). *Scientific Literacy in Zambian High School Biology Curriculum*. Paper presentation at the National Association of Research in Science Teaching (NARST). Atlanta, Georgia, USA. March 10-13, 2018. Paper ID: Q-1007045- 6673.
7. Mumba, F. & **Chabalengula, V. M.** (2018). *Chemistry Teaching Assistants' Beliefs about Project-Based Guided Inquiry Instruction*. Paper presentation at the National Association of Research in Science Teaching (NARST). Atlanta, Georgia, USA. March 10-13, 2018. Paper ID: P-1012626-6899.
8. Nicolaides, I\*., **Chabalengula, V. M.** & Mumba, F. (2018). *High School Biology Students' Learning Interests and Formal Curriculum Emphasis*. Paper presentation at the National Association of Research in Science Teaching (NARST). Atlanta, Georgia, USA. March 10-13, 2018. Paper ID: Q-1013641-6683.
9. Mumba, F. & **Chabalengula, V. M.** (2018). *Engineering Design in Science Teacher Education Project: Teachers' Pedagogical Knowledge for Engineering Design Integrated Science Teaching, and Student Learning*. Paper presentation at the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE). Gabarone, Botswana, Africa. January 16-19, 2018. Paper ID: 8419.
10. Mumba, F., Ochs, L\*., Blankenship, S\*. & **Chabalengula, V. M.** (2017). *Essential Features of Inquiry in the American Biology Teacher and Journal of Chemical Education Journals*. Paper presentation at the ESERA conference. Dublin City University, Dublin, Ireland August 21 – 25, 2017.
11. Neitzer, L\*., **Chabalengula, V. M.** & Mumba, F. (2017). *Intersection between Global and Self-Reported Community-Based Environmental Concerns*. Paper presentation at the National Association for Research in Science Teaching (NARST). San Antonio, Texas, USA. April 22-25, 2017. Paper ID: Q-1010672-6083.
12. Chitiyo, J\*., **Chabalengula, V. M.** & Mumba, F. (2017). *Pre-service Teachers' Attitudes Toward Biotechnology Applications*. Paper presentation at the National Association of Research in Science Teaching (NARST). San Antonio, Texas, USA. April 22-25, 2017. Paper ID: Q-1007045-6019.

13. Rutt, A\*, Mumba, F., **Chabalengula, V. M.** & Ochs, L\*. (2017). *Middle School Science Teachers' Technology Decision for Inclusive Science Classrooms*. Paper presentation at the National Association of Research in Science Teaching (NARST). San Antonio, Texas, USA. April 22-25, 2017. Paper ID: P-1012626-5680.
14. **Chabalengula, V. M.**, Bendjemil, S. A\*, Mumba, F. & Chiu, J. L. (2017). *Status of Science and Engineering Practices in K-12 Science Curriculum Materials*. Paper presented at the Association of Science Teacher Educators (ASTE) International Conference. Des Moines, Iowa, USA. January 12-14, 2017. Proposal ID 10086.
15. **Chabalengula, V. M.** & Mumba, F. (2016). *Energy conservation in biological contexts: Intersection between scientific and everyday language usage*. Paper presented at the National Association of Research in Science Teaching (NARST). Baltimore, Maryland, USA. April 14-17, 2016. Paper number: Q-1007045-5128.
16. Chitiyo, J\*, **Chabalengula, V. M.** & Mumba, F. (2016). *Understanding of biotechnology processes among pre-service science teachers*. Paper presented at the National Association of Research in Science Teaching (NARST). Baltimore, Maryland, USA. April 14-17, 2016. Paper number: Q-1011824-5144.
17. Ochs, L. K\*, Mumba, F. & **Chabalengula, V. M.** (2016). *Technology Teachers' Use in Inclusive Chemistry Classrooms and Factors that influence the Selection of such Technology*. Paper presented at the National Association of Research in Science Teaching (NARST). Baltimore, Maryland, USA. April 14-17, 2016. Paper number: Q-1010121-5110.
18. Mumba, F., Ochs, L\* & **Chabalengula, VM.** (2016). *Chemistry Teachers' Technology Decisions for Inclusive Chemistry Classrooms*. Paper presented at the Association of Science Teacher Educators (ASTE) International Conference. Reno, Nevada, USA. January 7 - 9, 2016.
19. Ochs, L\*, Mumba, F. & **Chabalengula, V.M.** (2016). *Analysis of Inquiry Practices in the American Biology Teacher*. Paper presented at the Association of Science Teacher Educators (ASTE) International Conference. Reno, Nevada, USA. January 7 - 9, 2016.
20. **Chabalengula, V. M.**, Mumba, F. & Bendjemil, S. A\*. (2015). *Engineering design process skills coverage in K-12 science curricula*. Paper presented at the National Association of Research in Science Teaching (NARST). Chicago, IL, USA. April 11 - 14, 2015.
21. Bendjemil, S. A\*, **Chabalengula, V. M.** & Mumba, F. (2015). *Science and engineering practices coverage in K-12 engineering curricula*. Paper presented at the National Association of Research in Science Teaching (NARST). Chicago, IL, USA. April 11 - 14, 2015.
22. Neitzer, L\*, **Chabalengula, V. M.** & Mumba, F. (2015). *Environmental-related literacies specified in the NGSS: Students' attitudes, knowledge and concerns*. Paper presented at the National Association of Research in Science Teaching (NARST). Chicago, IL, USA. April 11 - 14, 2015.
23. Mumba, F., Jones, N\* & **Chabalengula, V. M.** (2015). *Science teachers' familiarity with, interest in and conceptual knowledge of basic microbiology concepts*. Paper presented at the National Association of Research in Science Teaching (NARST). Chicago, IL, USA. April 11 - 14, 2015.

24. **Chabalengula, V. M.**, Mumba, F. & Fateen, R\*. (2015). *Engaging pre-service science teachers in learning and teaching of homeostasis using computer simulation*. Paper presented at the Association of Science Teacher Educators (ASTE) International Conference. Portland, Oregon, USA. January 7-10, 2015.
25. Banda, A\*., Mumba, F. & **Chabalengula, V. M.** (2015). *Using Scenarios to Assess Pre-service Science Teachers' Pedagogical Strategies for addressing Students' Misconceptions on Electrolysis*. Paper presented at the Association of Science Teacher Educators (ASTE) International Conference. Portland, Oregon, USA. January 7-10, 2015.
26. Mumba, F., Banda, A\*., **Chabalengula, V. M.** & Dolenc, N\*. (2015). *Chemistry Teachers' Perceived Benefits and Challenges of Inquiry-based Instruction in Inclusive Chemistry Classrooms*. Paper presented at the Association of Science Teacher Educators (ASTE) International Conference. Portland, Oregon, USA. January 7-10, 2015.
27. Dolenc, N\*., Mumba, F. & **Chabalengula, V. M.** (2015). *Assessing High School Science Teachers' Conceptions of Inquiry through Scenarios and Lesson Narratives*. Paper presented at the Association of Science Teacher Educators (ASTE) International Conference. Portland, Oregon, USA. January 7-10, 2015.
28. **Chabalengula, V. M.** & Mumba, F. (2014). *Teaching Biological-Context Energy within the USA's Next Generation Science Standards (NGSS)*. Paper accepted for presentation at the 10th Conference of European Researchers in Didactics of Biology (ERIDOB). Haifa, Israel. June 30 - July 4, 2014.
29. **Chabalengula, V. M.** & Mumba, F. (2014). *Understanding of Biological-Context Energy*. Paper accepted for presentation at the 10th Conference of European Researchers in Didactics of Biology (ERIDOB). Haifa, Israel. June 30 - July 4, 2014.
30. **Chabalengula, V. M.** & Mumba, F. & Fateen, R\*. (2014). *Interactive Computer Simulation on Biology Teachers' Understanding of Homeostasis Concepts*. Paper presented at the National Association of Research in Science Teaching (NARST). Pittsburgh, PA, USA. March 30 - April 2, 2014).
31. **Chabalengula, V. M.** & Mumba, F. (2014). *Impact of Scientific modeling on Pre- Service Teachers' knowledge Generation*. Paper presented at the National Association of Research in Science Teaching (NARST). Pittsburgh, PA, USA. March 30 - April 2, 2014).
32. Mumba, F. & **Chabalengula, V. M.** (2014). *Examining Pre-service teachers' Conceptions of Inquiry using Teaching Scenarios*. Paper presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Pittsburgh, PA, USA. March 30 - April 2, 2014).
33. Al Sultan, A\*., **Chabalengula, V. M.** & Mumba, F. (2014). *Pre-service Teachers' Scientific Literacy Level*. Paper presented at the National Association of Research in Science Teaching (NARST) Annual International Conference, Pittsburgh, PA, USA. March 30 - April 2, 2014). 30.
34. Kalonde, G\*., **Chabalengula, V. M.** & Mumba, F. (2014). *Pre-Service Teachers' Attitudes, Benefits and Usage of Computer Mediated Science Instruction*. Paper presentation at the Society for Information Technology & Teacher Education (SITE) International Conference. Jacksonville, Florida, USA. March 17-21, 2014.

35. Al Sultan, A\*., **Chabalengula, V. M.** & Mumba, F. (2014). *Attitudes towards science and science teaching among pre-service teachers*. Paper presented at the Association of Teacher Educators (ATE) annual conference. St. Louis, Missouri, USA. February 15-18, 2014.
36. Ataallh, A\*., **Chabalengula, V. M.** & Mumba, F. (2014). *Pre-service teachers' attitudes, understanding and teaching confidence towards science*. Paper presented at the Association of Teacher Educators (ATE) annual conference. St. Louis, Missouri, USA. February 15-18, 2014.
37. Kalonde, G\*., **Chabalengula, V. M.** & Mumba, F. (2014). *Pre-Service teachers' Attitudes, Perceptions and Usage of Technology Mediated Science Instruction*. Paper presented at the Association of Teacher Educators (ATE) annual conference. St. Louis, Missouri, USA. February 15-18, 2014.
38. Al Sultan, A\*., **Chabalengula, V. M.** & Mumba, F. (2014). *Pre-service teachers' personal and professional attitudes towards science*. Paper presentation at the Association of Science Teacher Educators (ASTE) International Conference. San Antonio, Texas, USA. January 16- 18, 2014.
39. Ataallh Alatoai, A\*., **Chabalengula, V. M.** & Mumba, F. (2014). *Effects of science methods course level on pre-service teachers' science attitudes, understanding and teaching confidence*. Paper presentation at the Association of Science Teacher Educators (ASTE) International Conference. San Antonio, Texas, USA. January 16-18, 2014.
40. Rose, P\*., **Chabalengula, V. M.** & Mumba, F. (2013). *Chemistry anxiety, attitudes, and selfefficacy in high school students*. Paper presented at the Southeast Regional Meeting of the American Chemical Society (SERMACS). Atlanta, Georgia, USA. November 12-16, 2013.
41. Fateen, R\*., **Chabalengula, V. M.** & Mumba, F. (2013). *Teaching homeostasis and its related concepts using computer simulation*. Paper presentation at the National Association of Biology teachers (NABT) Professional Development Conference. Atlanta, Georgia, USA. Nov 20 - 23, 2013.
42. Mumba, F., Mbewe, S\*., & **Chabalengula, V. M.** (2013). *Elementary Education Pre- service Teachers' Performance on Context-based Science Process Skills*. Paper presentation at the National Association of Research in Science Teaching (NARST) Annual International Conference. Rio Grande, Puerto Rico, USA. April 6 - 9, 2013.
43. **Chabalengula, V. M.** & Mumba, F. (2012). *Teaching Breathing Process using Model-Based Inquiry Instruction*. Paper presentation at the National Association of Biology Teachers (NABT) Professional Development Conference, Dallas, Texas, October 31 - November 3, 2012
44. Nicolaides, I\*., & **Chabalengula, V. M.** (2012). *Effect of Shadow Curriculum in a High School Biology Classroom*. Poster presentation at the National Association of Biology teachers (NABT) Professional Development Conference, Dallas, Texas, October 31 - November 3, 2012.
45. Mumba, F., Banda, A\*., & **Chabalengula, V. M.** (2012). *Students' views of chemistry as a science and of chemistry studies in their classes*. Paper presentation at the 244th American Chemical Society National Meeting & Exposition, Philadelphia, PA, August, 19-23, 2012.
46. **Chabalengula, V. M.** & Mumba, F. (2012). *Model-Based Inquiry Instruction: Promoting Knowledge Generation in Biology*. Paper presentation at the National Association of Research in Science Teaching (NARST) Meeting, Indianapolis, Indiana, USA. March 25 - 28, 2012.

47. Mumba, F., **Chabalengula, V. M.** & Mbewe, S\*. (2012). *Elementary Education Teachers' Interest in and Conceptual Knowledge of Science Process Skills*. Paper presentation at the National Association of Research in Science Teaching (NARST) Meeting, Indianapolis, Indiana, USA. March 25 - 28, 2012.
48. Miles, E\*, Mumba, F., **Chabalengula, V. M.** & Wise, K. (2012). *In-Service Elementary Teachers' Familiarity and Interest in the Science Process Skills*. Paper presentation at the Association of Science Teacher Educators (ASTE) International Conference, Clearwater, Florida. January 4-7, 2012.
49. Banda, A\*, Mumba, F., Mbewe, S\*, & **Chabalengula, V.M.** (2011). *Zambian Pre- service science teachers' ranking of chemistry educational goals*. Paper presentation at The American Chemical Society (ACS) regional meeting, Saint Louis, Missouri, USA. October 19-22, 2011.
50. Mumba, F., **Chabalengula, V. M.**, Banda, A\*. & Mbewe, S\*. (2011). *High School Students' Attitude towards Chemistry as a Science and Chemistry Studies*. Paper presentation at the Joint Midwest and Great Lakes American Chemical Society Regional Meeting, St. Louis, Missouri, USA. October 19-22, 2011.
51. Mumba, F., Banda, A\*, **Chabalengula, V. M.**, Mbewe, S\*. & Hunter, W. (2011). *Comparison between Zambian male and female pre-service teachers understanding of the particulate nature of matter*. Paper presentation at 242nd American Chemical Society National Meeting. Denver, Colorado, USA. August 28 – September 1, 2011.
52. **Chabalengula, V. M.**, Mumba, F., Henson, H., Bu, L. & Wright, M. (2011). *In- service Teachers' Perceived Benefits and Difficulties of Inquiry*. Paper presentation at the Association of Teacher Educators (ATE) Summer Meeting. Philadelphia, Pennsylvania, USA. August 5- 9, 2011.
53. Mbewe, S\*, **Chabalengula, V. M.**, Mumba, F., Henson, H., Bu, L. & Wright, M. (2011). *Preservice K-8 Science Teachers' Conceptual Understanding of Science Process Skills*. Paper presentation at the Association of Teacher Educators (ATE) Summer Meeting. Philadelphia, Pennsylvania, USA. August 5- 9, 2011.
54. Mumba, F., **Chabalengula, V. M.**, Henson, H., Bu, L. & Wright, M. (2011). *Elementary Education In-service Teachers' Inquiry Instructional Practice*. Paper presentation at the Association of Teacher Educators (ATE) Summer Meeting. Philadelphia, Pennsylvania, USA. August 5- 9, 2011.
55. **Chabalengula, V. M.**, Zhu, M. & Mumba, F. (2011). *A Novel Framework for Science Teacher-Leaders in Computer Simulations and Animations Integration*. Paper presentation at The 4th Redesigning Pedagogy: Transforming Teaching, Inspiring Learning International Conference. National Institute of Education, Singapore. May 30 - June 1, 2011.
56. Mumba, F., **Chabalengula, V. M.**, Henson, H. & Lind, K. (2011). *Primary and middle school science teachers' instructional practice and their perceived benefits and difficulties of inquiry*. Paper presentation at The 4th Redesigning Pedagogy: Transforming Teaching, Inspiring Learning International Conference. National Institute of Education, Singapore. May 30 – June 1, 2011.
57. Fisher, C\*, **Chabalengula, V. M.** & Mumba, F. (2011). *Attitudes towards science and technology among general education development students*. Paper presentation at the National Association of Research in Science Teaching (NARST) meeting, Orlando, Florida, USA. April 3-6, 2011.

58. Mumba, F., **Chabalengula, V. M.** & Chitiyo, J\*. (2011). *Pre-service teachers' attitude towards biotechnology processes*. Paper presentation at the National Association of Research in Science Teaching (NARST) Meeting, Orlando, Florida, USA. April 3- 6, 2011.
59. Banda, A\*., Mumba, F. & **Chabalengula, V. M.** (2011). *Zambian pre-service science teachers' understanding of the particulate nature of matter*. Paper presentation at The American Chemical Society (ACS) 241st National Meeting, Anaheim, California, USA. March 27-31, 2011.
60. **Chabalengula, V. M.**, Mumba, F., Zhu, M., Banda, A., Mbewe, S\* & Miles, E\*. (2011). *Science Teachers' Familiarity of and Interest in Computer Simulations, Animations, Visualization, Modeling and Virtual reality*. Paper presentation at the Society for Information Technology & Teacher Education (SITTE) 22nd International Conference. Nashville, Tennessee, USA. March 7-11, 2011.
61. Mumba, F., Zhu, M. & **Chabalengula, V. M.** (2011). *An Interactive Simulation based Virtual Classroom System using Cloud Computing Technology*. Paper presentation at the Society for Information Technology & Teacher Education (SITTE) International Conference. Nashville, Tennessee, USA. March 7-11, 2011.
62. Mbewe, S\*., Mumba, F., **Chabalengula, V.M.**, Wright, M., Henson, H. & Bu, L. (2011). *MSP In-Service Teachers' Instructional Practice and their Perceived Benefits and Difficulties of Inquiry*. Paper presentation at the Math and Science Partnerships Regional Conference. Baltimore, Maryland, USA. February 14-17, 2011.
63. Banda, A\*., Mumba, F. & **Chabalengula, V. M.** (2011). *Effect of Teachers' Professional Development Programs on Teachers' Conceptual knowledge about Simulations, Animations, and Visualizations*. Paper presentation at the Math and Science Partnerships Regional Conference, Baltimore, Maryland, USA. February 14-17, 2011.
64. Miles, E\*., Mumba, F. & **Chabalengula, V. M.** (2011). *Pre-service teachers' familiarity, interest and understanding of process skills*. Paper presentation at the American Educational Research Association (AERA) 2011 Meeting, New Orleans, Louisiana, USA.
65. Mbewe, S\*., **Chabalengula, V. M.** & Mumba, F. (2011). *Exploring teachers' familiarity, interest and conceptual understanding of science process skills*. Paper presentation at the Association for Science Teacher Educators (ASTE) International Conference. Minneapolis, Minnesota, USA. January 19-22, 2011.
66. **Chabalengula, V. M.**, Mumba, F., Henson, H., Wright, M. & Bu, L. (2010). *Design, Implementation & Impact of Mathematics and Science Project on US Primary and Middle School Teachers*. Paper presentation at the Science, Technology, Engineering and Mathematics (STEM) in Education Conference. Queensland University of Technology, Brisbane, Australia. November 26-27, 2010.
67. Mumba, F., **Chabalengula, V. M.**, Zhu, M. & Tsige, M. (2010). *Partnership for Improved Achievement in Science through Computational Science in Southern Illinois in USA*. Paper presentation at the Science, Technology, Engineering and Mathematics (STEM) in Education Conference. Queensland University of Technology, Brisbane, Australia. November 26-27, 2010.

68. Mumba, F., Henson, H., Renzaglia, K., **Chabalengula, V. M.** & Gibson, D. (2010). *Scientists' perceived benefits and difficulties of inquiry in US schools*. Paper presentation at the Science, Technology, Engineering and Mathematics (STEM) in Education Conference. Queensland University of Technology, Brisbane, Australia. November 26-27, 2010.
69. **Chabalengula, V. M.**, Mumba, F., Mbewe, S\*., Henson, H. & Wright, M. (2010). *Inquiry instructional practices of science teachers in Mathematics and Science Partnership Project*. Paper presentation at the Association of Teacher Educators (ATE). Summer Meeting. Kansas City, Missouri, USA. August 7-11, 2010.
70. Mumba, F., **Chabalengula, V. M.**, Mbewe, S\*., & Henson, H. (2010). *Teachers- Leaders reformed and inquiry science teaching & learning*. Paper presentation at the Association of Teacher Educators Summer meeting. Kansas City, Missouri, USA. August 7-11, 2010.
71. Mbewe, S\*., Mumba, F., **Chabalengula, V. M.**, Henson, H. & Wright, M. (2010). *Exploring Teacher-Leaders' reformed teaching through examination of design and implementation*. Paper presentation at the Association of Teacher Educators (ATE). Kansas City, Missouri, USA. August 7-11, 2010.
72. **Chabalengula, V.M.**, Mumba, F., Wilson-Miles, E.N\*., & Mejia, W.F\*. (2010). *Pre- service elementary education teachers' attitude towards graphs*. Paper presentation at the American Educational Research Association (AERA) Meeting. Denver, Colorado, USA. April 30-May 4, 2010.
73. Mumba, F., **Chabalengula, V. M.**, Mbewe, S\*., & Henson, H. (2010). *Teachers' beliefs about reformed and inquiry-based science teaching & learning*. Paper presentation at the Midwest Association of Teacher Educators (MWATE), March 26, 2010, Urbana, Illinois, USA.
74. **Chabalengula, V. M.**, Mbewe, S\*., Mumba, F., Henson, H. & Wright, M. (2010). *Elementary and middle school science teachers' instructional practices*. Paper presentation at the Midwest Association of Teacher Educators (MWATE) Conference, March 26, 2010, Urbana, Illinois, USA.
75. Mbewe, S\*., Mumba, F., Wright, M., Henson, H. & **Chabalengula, V. M.** (2010). *Assessing math and science teachers' reformed teaching through examination of design, and implementation*. Paper presentation at the Midwest Association of Teacher Educators (MWATE) Conference, March 26, 2010, Urbana, Illinois, USA.
76. Mumba, F., Mejia, W.F\*., Wilson-Miles, E.N\*., **Chabalengula, V.M.** & Hunter, W.F.J. (2010). *Resident scientists' inquiry instructional practice and their perceived benefits and difficulties for inquiry in schools*. Paper presentation at the National Association for Research in Science Teaching (NARST) Meeting. Philadelphia, Pennsylvania, USA. March 21-24, 2010.
77. Wilson-Miles, E\*., Mumba, F., **Chabalengula, V.M.**, Mbewe, S\*., Henson, H. & Wright, M. (2010). *A comparison of pre- and in-service teachers' perception of chemistry*. Paper presentation at The 90th Annual Conference of the Association of Teacher Educators (ATE). Chicago, Illinois, USA. February 13-17, 2010.
78. Mbewe, S\*., Mumba, F., Wilson-Miles, E\*., **Chabalengula, V.M.**, Henson, H. & Wright, M. (2010). *Elementary education teachers' perceived difficulties and benefits for inquiry*. Paper presentation at The 90th Annual Conference of the Association of Teacher Educators (ATE). Chicago, Illinois, USA. February 13-17, 2010.

79. Sasser, S\*., Mbewe, S\*., Mumba, F., **Chabalengula, V.M.**, Wilson-Miles, E\*., & Henson, H. (2010). *Resident scientists' perceived instructional training needs for high school science teaching*. Paper presentation at The 90th Annual Conference of the Association of Teacher Educators (ATE). Chicago, Illinois, USA. February 13- 17, 2010.
80. Mumba, F., Wilson-Miles, E.N\*., **Chabalengula, V.M.** & Mejia, W.F\*. (2010). *Pre- service elementary education teachers' attitude towards graphs*. Paper presentation at the American Educational Research Association (AERA) 2010 Meeting. Denver, Colorado, USA.
81. Wilson-Miles, E.N\*., Mumba, F., **Chabalengula, V.M.** & Mejia, W.F\*. (2010). *Elementary education in-service teachers' attitude towards chemistry*. Paper presentation at the American Educational Research Association (AERA) 2010 Meeting. Denver, Colorado, USA.
82. **Chabalengula, V.M.**, Mumba, F. William, W.F. & Wilson-Miles, E.N\*. (2010). *High school students' attitude towards graphs*. Paper presentation at the American Educational Research Association (AERA) 2010 Meeting, Denver, Colorado, USA.
83. Mumba, F., Mejia, W\*., **Chabalengula, V.M.** & Wilson-Miles, E.N\*. (2010). *Resident scientists' inquiry instructional practice in schools*. Paper presentation at the American Educational Research Association (AERA) 2010 Meeting, Denver, Colorado, USA.
84. Wilson-Miles, E.N\*., Mumba, F., **Chabalengula, V.M.** & Mejia, W.F\*. (2010). *Comparing preservice and in-service elementary teachers' attitude towards chemistry*. Paper presentation at the National Association for Research in Science Teaching (NARST) Meeting, Philadelphia, Pennsylvania, USA.
85. Mejia, W.F\*., Mumba, F., **Chabalengula, V.M.** & Wilson-Miles, E.N\*. (2010). *Elementary education in-service teachers' inquiry practice and their perceived difficulties and benefits for inquiry*. Paper presentation at the National Association for Research in Science Teaching (NARST) meeting, Philadelphia, Pennsylvania, USA.
86. Mumba, F., Mejia, W.F., **Chabalengula, V.M.** & Wilson-Miles, E.N. (2010). *Effect of interactive computer simulations on elementary education teachers' understanding of Kirchoff's and Ohm's laws*. Paper presentation at the Association of Science Teacher Education (ASTE) Annual Meeting, Sacramento, California, USA. January 2010.
87. Mejia, W.F\*., Mumba, F. & **Chabalengula, V.M.** (2010). *Resident Scientists' perceived benefits and difficulties for inquiry in schools*. Paper presentation at the Association of Science Teacher Education (ASTE) Meeting, Sacramento, California, USA. January 2010.
88. Mbewe, S\*., Mumba, F., Wilson-Miles, E\*., **Chabalengula, V.M.**, Henson, H. & Wright, M. (2010). *Elementary education teachers' perceived difficulties and benefits for inquiry*. Paper presentation at The 90th Annual Conference of the Association of Teacher Educators (ATE), Chicago, Illinois, USA. February 13-17, 2010.
89. Mbewe, S\*., Mumba, F., Wright, M., Henson, H. & **Chabalengula, V.M.** (2009). *Effect of Interactive Computer Simulations on Elementary Education Teachers' Understanding of Light Matter Interactions*. Paper presentation at The Joint APS, AAPT and SPS Meeting, San Marco, TX. October 22-24, 2009.



90. Mumba, F., Mbewe, S\*, **Chabalengula, V.M.**, Wilson, E\*., Wright, M., Henson, H. & Hunter, W. (2009). *In-service elementary teachers' perceived image of chemistry, cognitive abilities and affection for chemistry*. Paper presentation at the American Chemical Society, 61st Southeast Regional Meeting, San Juan, Puerto Rico. October 21-24, 2009.
91. Mumba, F., Wilson, E.N\*. & **Chabalengula, V.M.** (2009). *Integrating math and science in K12 through process skills activity*. Paper presentation at The Mt. Vernon Annual Conference for Teachers. Mt. Vernon, IL, October 2009.
92. Sasser, S\*., Mumba, F., **Chabalengula, V.M.**, Mbewe, S. \*, Wilson, E\*. & Mejia, W\*. (2009). *Resident scientists' decision-making on science curriculum, instruction, and assessment*. Paper presentation at the Brown Bag Series, College of Education and Human Services, Southern Illinois University Carbondale, Carbondale, IL. September 15, 2009.
93. Mumba, F., Wilson, E.N\*., **Chabalengula, V.M.** & Hunter, W.J.F. (2009). *Scientific literacy themes coverage in a high school chemistry course*. Paper presentation at The 238th American Chemical Society (ACS) National Meeting, Washington, DC. August 16-20, 2009.
94. Wilson, E.N\*., Mumba, F., **Chabalengula, V.M.** & Wise, K. (2009). *Examining chemical literacy among pre-service teachers*. Paper presentation at The 238th American Chemical Society (ACS) National Meeting, Washington DC. August 16- 20, 2009.
95. Hollman, G\*., Mumba, F. & **Chabalengula, V.M.** (2009). *Attitudes of non-science major undergraduate students towards studying physics, physics labs, and physics lectures*. Paper presentation at the American Association of Physics Teachers Meeting. Ann Arbor, MI. July 25-29, 2009.
96. Wilson, E.N\*., Mumba, F., **Chabalengula, V.M.** & Wise, K. (2009). *Attitudes of preservice elementary teachers towards chemistry*. Paper presentation at the Northwest Regional American Chemical Society Meeting. Tacoma, WA. June 28, 2009.
97. Thankamani, J\*., Mumba, F. & **Chabalengula, V.M.** (2009). *Undergraduate students' attitude towards the study of chemistry*. Paper presentation at The 38th Great Lakes Regional American Chemical Society (ACS) Meeting. Chicago, IL. May 13-16,2009.
98. Mumba, F., Carver, J., **Chabalengula, V.M.** & Hunter, W.F.J. (2009). *Junior chemists' understanding of the nature of scientific theories and laws*. Paper presentation at the National Association for Research in Science Teaching (NARST) meeting. Orange Grove, CA. April 17-21, 2009.
99. Mumba, F., Wilson, E.N\*. & **Chabalengula, V.M.** (2009). *Closing the gap between math and science in K-12 through process skills activity*. Paper presentation at the Closing the Gap: Practical Strategies for All Educators Meeting. John Logan College, Carterville, IL. March 30, 2009.
100. Mumba, F., **Chabalengula, V. M.** & Hunter, W. (2008). *Balance of scientific literacy themes in Zambian high school chemistry textbooks, syllabus and examinations*. Paper presentation at the National Association for Research in Science teaching (NARST). Baltimore, MD. April, 2008.

101. Mumba, F., **Chabalengula, V. M.** & Hunter, W. (2008). Graphing skills among pre- service elementary science teachers. Paper presentation at the Association of Science Teacher Education (ASTE). St. Louis, MO. January 10-12, 2008.
102. Mumba, F., **Chabalengula, V.M.** & Hunter, W. (2007). *Balance of scientific literacy themes in Zambian high school physics course*. Paper presentation at the American Education Research Association (AERA). Chicago, IL. April 9-13, 2007.
103. Mumba, F., Hunter, W. & **Chabalengula, V.M.** (2007). *How do high school chemistry teachers teach chemistry in inclusive classes?* Paper presentation at The 63rd Southwest Regional Meeting of the American Chemical Society. Texas Tech University, Lubbock, USA. November 4-7, 2007.
104. Mumba, F., **Chabalengula, V. M.**, Hunter, W. & Moore, C. (2006). *Science and mathematics teaching fellows' instructional planning for k-12 classrooms*. Paper presentation at the American Education Research Association (AERA). San Francisco, CA. April 7-11, 2006.
105. Mumba, F., **Chabalengula, V. M.**, Hunter, W. & Moore, C. (2006). *Science teaching fellows' conceptions of teaching*. Paper presentation at the National Association for Research in Science teaching (NARST). San Francisco, CA. April 3-7, 2006.
106. Mumba, F., **Chabalengula, V. M.**, Hunter, W. & Moore, C. (2005). *Chemistry teaching fellows' conceptions of teaching*. Paper presentation at the Regional American Chemical Society (ACS). Joplin, MO. October 26, 2005.
107. Mumba F., **Chabalengula V.M.**, Hunter W.J.F. Lorschbach T. & Moore, C.J. (2005). *Mathematics and science Teaching Fellows' development and understanding of the nature of science*. Paper presentation at the Eighth International History, Philosophy, Sociology & Science Teaching Conference. Leeds, England. July 2005.
108. Mumba, F., **Chabalengula, V. M.**, Hunter, W., Moore, C. & Grogg, J. (2005). *Views and practices in planning for teaching: a case study of graduate teaching fellows working in a School-University Partnership Project*. Paper presentation at the National Association for Research in Science Teaching (NARST). Dallas, Texas. April 12, 2005.
109. **Chabalengula, V. M.** & Jackson, Z. (2004). *Elementary and middle school students' views about mathematics, science and technology*. Paper presentation at The First Annual Research Symposium on Optimizing Mathematical Achievement for All Students. University of Maryland, College Park, Maryland, USA. September 23-24, 2004.
110. Mumba, F., Rollnick, M., **Chabalengula, V.M.** & Hunter, W. (2004). *Code- switching in chemistry lessons in South African township high schools*. Paper presentation at The 36th American Chemical Society (ACS) Great Lakes Regional Meeting. Peoria, IL. October 17- 20, 2004.
111. **Chabalengula, V. M.**, Mumba F., Hunter, W. J. F., Moore, C. J., Grogg, J. & Plantholt, M. (2004). *Professional growth of ISU graduate students and K-12 teachers as they work together to improve mathematics and science education in schools*. Paper presentation at the Graduate Research Symposium. Illinois State University, Normal, Illinois, USA. April 23, 2004.

112. Mumba F., **Chabalengula, V.M.** & Bassoppo-Moyo, T. C. (2004). *Effectiveness of using computer-assisted supplementary instruction for teaching selected algebra topics at a laboratory high school*. Paper presentation at the Graduate Research Symposium. Illinois State University, Normal, IL, USA. April 23, 2004.
113. Mumba F., **Chabalengula, V. M.**, Hunter, J. F., Moore, C., Grogg, J., Thornton, C. & Plantholt, M. (2004). *Exploration of the content and nature of reflective practices of graduate teaching fellows in a school-university partnership project*. Paper presentation at the National Association for Research in Science Teaching (NARST). Vancouver, British Columbia, Canada. April 1-4, 2004.
114. Hunter, W., Carver, J., Mumba, F., Bergman, J., **Chabalengula, V. M.**, Taylor, C., Millen, K. & Micklos, A. (2004). *Experimental data in the hands and minds of students*. Paper presentation at The 227th American Chemical Society (ACS) National Meeting. Anaheim, CA. March 28-April 1, 2004.
115. Mumba, F., Hunter, W. J. F., Moore, C. J., Grogg, J., Plantholt, M. & **Chabalengula, V. M.** (2004). *Partnerships in PRISM project: An evaluation perspective*. Paper presentation at the Symposium on Partnership in Teaching and Learning at Illinois State University. Bloomington, Illinois, USA. January 7, 2004.
116. Hunter, W.J.F., Mumba, F., **Chabalengula, V. M.**, Oke, T., Grogg, J., Plantholt, M. & Moore, C. (2003). *Lessons learned in working in high school science and math classrooms*. Paper presentation at the Regional National Science Teachers Association (NSTA) Meeting. Kansas City, MO. November 2003.
117. Mumba, F., Hunter, J. F., Moore, C. J., **Chabalengula, V. M.**, Grogg, J., Thornton, C. & Plantholt, M. (2003). *Professional growth through interactions between K-12 teachers and graduate students in chemistry, mathematics and biology*. Paper presentation at The 226th American Chemical Society (ACS) National meeting. New York. September 7-11, 2003.
118. Haambokoma, C., **Chabalengula, V. M.** & Murdock, J. (2003). *Feasibility of providing training in teaching through distance mode to untrained graduate teachers of mathematics and science*. Paper presentation at the Southern African Association for Research in Mathematics, Science, and Technology Education (SAARMSTE). University of Swaziland, Mbabane, Swaziland. January 2003.
119. **Chabalengula, V. M.** (2002). *Energy and energy-related concepts in biology*. Paper presentation at the Conference on Current Issues in Mathematics and Science Education. University of the Western Cape (UWC), Cape Town, South Africa. March 2002.
120. **Chabalengula, V. M.** (2001). *Feasibility of offering distance education to science and mathematics teachers in Zambia*. Paper presentation at the Science Education Conference. Northern College, Aberdeen, Scotland. November 13-27, 2001.
121. **Chabalengula, V. M.** (2001). *Problematic issues on energy and energy-related concepts in science education*. Paper presentation at the Issues in Science Education Conference. University of the Western Cape (UWC), Cape Town, South Africa. September 2001.

122. **Chabalengula, V. M.** (2001). *Research methods in mathematics and science education*. Paper presentation at the Conference on Science Education. University of the Western Cape (UWC), Cape Town, South Africa. March 15-22, 2001.
123. **Chabalengula, V. M.** (2001). *Analysis of mathematics and science pupils' textbooks and teachers' guides for gender sensitivity and inclusiveness*. Paper presentation at the Conference on Female Education in Mathematics and Science in Africa (FEMSA) and Forum for African Women Educationalists of Zambia (FAWEZA). Kafue Gorge Regional Training Center, Kafue, Zambia. April 8-12, 2001.
124. **Chabalengula, V. M. & Sanders, M.** (2001). *First-year university medical students' ideas about energy and energy related concepts*. Paper presentation at The 9th Annual Southern African Association for Research in Mathematics, Science, and Technology Education (SAARMSTE). Eduardo Mondlane University, Maputo, Mozambique. January 17-22, 2001.
125. **Chabalengula, V. M.** (2000). *Practical work in science teaching*. Paper presentation at the Science Education Conference. Johannesburg College of Education (JCE), Johannesburg, South Africa. July 17, 2000.
126. **Chabalengula, V. M.** (1997). *Action to Improve English, Mathematics and Science (AIEMS)*. Paper presentation at the Science Teachers' Workshop. Monze District Resource Center, Zambia.

### **Other Scholarly Activities:**

#### Technical reports

Haambokoma, C., **Chabalengula, V. M.**, Nkhata, B., Kostyuk, V., Mbewe, S., Tabakamulamu, M., Ndhlovu, Z., Mushanga, R. & Nthani, D. (2002). Strengthening of mathematics and science education in Zambian secondary schools. Baseline study report. Ministry of Education Press, Lusaka, Zambia.

### **Scholarly Activities in Progress:**

1. Neitzer, L. & Chabalengula, V. M. Next Generation Environmental Literacy: High School Students' Attitudes, Knowledge and Concerns.
2. Chabalengula, V. M. & Nicolaidis, I. Effects of a shadow curriculum in a high school biology learning environment.
3. Fisher, L. & Chabalengula, V. M. STEM skills among nontraditional GED students.
4. Chabalengula, V. M. & Dandridge, L. Factors influencing ethnic-minority high school students' career aspirations in the sciences.

#### IV. TEACHING/ADVISING/MENTORING

##### TEACHING:

(Interests/specialties, and courses taught at UVA and other universities)

##### Teaching Interests and Specialties:

- Science Education Theory and Research
- High School Science Teaching/Learning Methods
- High School Biology & Chemistry

##### Courses taught at Various Universities:

##### **University of Virginia, USA:**

##### Undergraduate Courses:

2014-Present: EDIS 2010 - Teaching as a Profession

2014-Present: EDIS 2880 - Field Experience

##### Science/Math Teacher Education Courses:

Fall 2023: EDIS 5864 - Clinical Experience in Mathematics Education

EDIS 5865 - Clinical Experience in Science Education

Spring 2017/2018/2020: EDIS 7991- Field Project

Fall 2015, Spring 2016: EDIS 3450 - Teaching with Technology

Fall 2014: EDIS 5885 - Teaching Associateship: Science Education

##### Master of Science Education Courses (Online MEd Program):

*(I designed all the five Science Education courses offered in the Online MEd Program)*

Fall 2021: EDIS 5036 - Trends & Issues in Science Education

Spring 2022: EDIS 5039 - Science Curriculum Design for Diverse Learners/Settings

Summer 2022: EDIS 5038 - Science Instruction Technologies.

Fall 2022: EDIS 5037 - Science Inquiry Models.

Spring 2023: EDIS 5053 - Science Education Leadership.

##### **Southern Illinois University, USA:**

2011-2013: CI 548 - Science Education Research Investigations.

2010-2013: CI 468 - Science Methods for Middle and High School Settings.

2008-2010: CI 585D - Topical Seminar in Science Education.

2007-2013: CI 427 - Science Process and Content for Teachers.

2006-2011: CI 426 - Introduction to Science Teaching Methods.

##### **Illinois State University, USA:**

2005: BSC 161 - Introduction to Teaching Biological Sciences (Co-taught, Dr. Cynthia Moore).

##### **University of Zambia, Zambia:**

1999-2002: MSE 341- Introduction to Biology Teaching Methods.

MSE 441- Advanced Biology Teaching Methods.

MSE 361- Introduction to Chemistry Teaching Methods.

MSE 461- Advanced Chemistry Teaching Methods.

##### **University of the Witwatersrand, South Africa:**

1999-2001: Biology 110-General Biology labs & tutorials.

**ADVISING/MENTORING/SUPERVISION:**

(Graduate students, pre-service high school science teachers, and undergraduate students)

Graduate Students Advising/Mentoring**University of Virginia, USA:**

Spring 2023: Academic advisor for an EdD capstone project (Jimmy Edwards).

Fall 2016-Present: Academic advisor, Online MEd students with interests in Science Education.

Fall 2019-Spr 2020: Mentored Alexis Rutt (PhD student) to analyze data and write-up, resulting in an article published in the *International Journal of Science and Mathematics Education* (2022).

Fall 2017-2018: Mentored Lauren Tabor (MAT student) in Curry's IDEAs grant research.

Fall 2016: Mentored a Graduate Teaching Assistant (Meredith McCool) in one section of EDIS 2010/2880 (Teaching as a Profession/Field Experience).

Spring 2014: Mentored Sonia Bendjemil (PhD student) in Curry's IDEAs grant research to analyze data and write-up, leading to one article published in *International Journal of Engineering Education* (2017).

**Southern Illinois University, USA:**

2008-2020: Graduate Student Advising/Mentoring in Science Education research. I mentored several graduate students in science education research, an effort which resulted in several conference presentations and publications in peer reviewed journals. (*Students with \* have presented at a conference, while those with # have published manuscripts in science education journals*).

1. \*Eugenia Nyirenda (PhD, 2020), Committee member.

2. Lyle Dandridge (PhD, 2019), Committee member.

3. \* # Rasheeta Fateen (PhD, 2020), Committee member.

4. \* # Asiana Banda (MEd 2012 & PhD 2014), Committee member.

5. \* Ataallh Alatoai (MEd 2013; PhD 2015), Committee member

6. \* Adam Alsultan (MEd 2012; PhD 2015), Committee member.

7. \* # Simeon Mbewe (PhD, 2012), Committee member.

8. \* Erin Miles (MEd 2010), Committee member.

High School Science/Math Student Teachers Supervision**University of Virginia, USA:**

Fall 2023: Supervised 5 science student teachers (EDIS 5865-Clinical Experience in Science Education), and 5 mathematics student teachers (EDIS 5864-Clinical Experience in Mathematics Education) in their respective Charlottesville-area middle/high schools.

Fall 2014: Supervised 8 high school science student teachers in their respective Charlottesville-area middle/high schools (EDIS 5885-Teaching Associateship: Science Education).

**Southern Illinois University, USA:**

2012-2013: Supervised 20 Master of Arts (MAT) High School Biology Student Teachers.

**University of Zambia, Zambia:**

2001-2002: Supervised 30 Biology & Chemistry High School Student Teachers posted to various high schools around the nine provinces of Zambia.

Undergraduate Students Mentoring/Supervision**University of Virginia:**

- Spring 2014-Present: Every Fall and Spring Semesters - EDIS 2880: Field Experience  
I mentor these students as they are volunteer tutors in local Charlottesville-area K-12 schools as part of their requirement in EDIS 2880 course.
- Spring 2014/2015: EDIS 4885: Field Experience: Science Education

**TEACHING PROFESSIONAL DEVELOPMENT WORKSHOPS:**

- Sep 12, 2023: Recognizing and Responding to a Student in Distress. Organized by the School of Education and Human Development Student Affairs Office.
- 2015-Present: Online teaching workshops through the online MEd program committee.
- May 4, 2018: Workshop series 1 on Online Teaching and Learning: Defining Quality at Curry. Sponsored by the Dean's Office, Curry School of Education. University of Virginia. Aimed at (a) reviewing key ideas from research on online learning that inform effective design, development, and implementation; (b) articulating what "the Curry experience" is that we desire for our expanding community of learners at a distance; (c) reviewing existing instruments for evaluation of online courses; and (d) identify what elements we want to borrow from those and what may still be missing (such as student engagement) that we want to develop as guidelines for Curry-specific quality evaluation tool for online classroom.
- Dec 5, 2017: Engaging Students Online. Sponsored by the Dean's Office, Curry School of Education. University of Virginia. Aimed at identifying tools and strategies for enhancing online teaching.
- 2015-2016: Participated in Curry's initiative for online MEd program via brown bags sessions.
- Oct 2-4, 2013: National Technology Leadership Summit (NTLS). Science & Engineering Design Strand. Washington DC, USA.
- Sep 28, 2013: Engineering Design with Engineering Tool Kits [ETKs]. (By Larry Richards and Susan Donohue, Mechanical Engineering). University of Virginia, Charlottesville, Virginia, USA.

**V. SERVICE**

(Membership in international/national science education organizations; Reviewer for science education conference and journal manuscripts; External examiner for theses/dissertations for other universities; Reviewer for Book Publishing companies/agencies; Faculty service to the University, school, department, and program; and service to K-12 schools)

**Membership in International/National Science Education Organizations:**

- 2004-Present: National Association for Research in Science Teaching (NARST).
- 2011-Present: Association for Science Teacher Educators (ASTE).
- 2011-Present: National Association for Biology Teachers (NABT).
- 2011-Present: Society for Information Technology & Teacher Education (SITTE). Science Education SIG Member
- 1999-Present: Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE).
- 2002-2005: Illinois Science Teachers Association (ISTA).

- 2002-2005: Illinois Association for Chemistry Teachers (IACT)  
 2001-2002: Female Education in Mathematics and Science in Africa (FEMSA).  
 2001-2002: Forum for African Women Educationalists of Zambia (FAWEZA).  
 1997-2002: Zambia Association for Science Education (ZASE).

**Reviewer, Conference Proposal Abstracts for Science Education Organizations:**

- 2008-Present: National Association for Research in Science Teaching (NARST).  
 2017-Present: Southern African Association for Research in Math, Science and Technology Education (SAARMSTE)  
 2015-Present: African Journal for Research in Math, Science, and Technology Education (AJRMSTE); and African Journal of Science, Technology, Innovation and Development (AJSTID)  
 Fall 2010: Environmental Issue Strand of the North American Association for Environmental Educators (NAAEE) conference.

**Reviewer, Journal Manuscripts for Science Education Journals:**

- 2018-Present: Reviewer for International Journal of STEM Education.  
 Reviewer for Science Educator Journal.  
 Fall 2015: Reviewer for special issue on “Current Trends in K-12 Engineering Education”.  
 International Journal of Engineering Education.  
 2014-Present: Journal of College Science Teaching (JCST).  
 2013-Present: Reviewer for special issue on STEM Education Research. Eurasia Journal of Mathematics, Science & Technology Education (EJMSTE).  
 2012-Present: Reviewer for Science Education Review (SER).  
 Invited Reviewer for articles on Scientific Literacy: European Journal of Educational Research.  
 2011-2013: Design and Modeling in Science, Education & Technology (DeMSET).  
 2010-2014: Electronic Journal of Science Education (EJSE).  
 2009-2012: International Journal of Environmental and Science Education (IJESE).  
 International Journal of Learning and Individual Differences.  
 2008-2012: Public Understanding of Science (PUS).

**External Examiner for Dissertations at non-US Universities:**

University of the Witwatersrand, Johannesburg, South Africa:

- Spring 2023: External Examiner for a PhD Dissertation in science education.  
 Josephine M. Chakawodza’s research topic: “Effectiveness of blended teaching on learning engagement and academic achievement in Organic Chemistry: A case study of South Africa Grade 12 Learners”. Major advisor: Dr. Mpunki Nakedi.

University of Johannesburg, South Africa:

- Fall 2023: External Examiner for one PhD Dissertation in science education titled: “The influence of contextual factors on pre-service science teachers’ development and enactment of TPACK in science teaching.” Major advisor: Prof. Umesh Ramnarain.  
 Spring 2022: External Examiner for a PhD Dissertation in science education.  
 Manzini S. Hlatshwayo’s research topic: “Using a learning progression for the particle model of matter as a scaffold for teachers in enacting classroom level formative assessment practices”. Major advisor: Prof. Umesh Ramnarain.



University of Zambia:

Spring-Fall 2019: External Examiner for two PhD Dissertations in biology education.

- Manda Kambi's research topic: Discourse patterns of lessons on topics perceived to be difficult in biology.
- Elias Muma's research topic: Hands-on teaching of genetics and pupils' academic achievement.

Curtin University, Australia:

Spring 2014: External Examiner for a PhD Dissertation in biology education.

Serena McCalla's research topic: Student Understanding, Attitude and Achievement: Assessment Comparisons in Genetics and Photosynthesis/Respiration.  
Major Advisor: Prof. David Treagust.

**Reviewer, Grant Proposals at US Universities:**University of Nebraska-Lincoln:

Spring 2022: Invited to review a grant proposal titled "*Health, Opportunity, and Equity (HOPE) for Children Initiative*" at the University of Nebraska-Lincoln's (UNL) Grand Challenges Catalyst award competition.

University of Virginia:

Summer 2014/2015: Proposal Reviewer for School of Education and Human Development Dean's IDEAs Grants. Reviewed four proposals in each summer.

**Reviewer, Book Publishing Agencies:**

Spring 2021: Invitation from Taylor and Francis publishers to review a book titled *Teach: A Question of Teaching*, by Jim Fraser. I was asked to evaluate the text's online resources with specific focus on how effective both the student and instructor resources were, how they could be improved if needed, and whether there were any additional types of resources that could be provided.

Spring 2020: Invitation from Pearson publishers to review the textbook titled *The Call to Teach: An Introduction to Teaching*, by Matthew Lynch. The purpose of this review was provide feedback on whether the text met the needs of instructors and students in the Introduction to Teaching courses in general.

**Faculty Service to Universities, Schools, Departments, Programs, and K-12 Schools:****University of Virginia, USA:**UVA-wide service:

- Spring 2018-Present: Curry Representative on a Quality Enhancement Plan (QEP) Subcommittee, Global Perspectives Committee, focused on assessing UVA undergraduates' Global Awareness skills at the end of their fourth year, a SACSCOC data point for UVA's institutional quality.
- Spring 2015: Faculty Marshall at May 17th Graduation Ceremony.
- Summer 2015: Participated and presented a seminar on "Women and Science Education in Africa" among 25 African Young Leaders from across African continent, who came to UVA under the United States' Mandela-Washington Fellows program.

School of Education & Human Development:

- Fall 2016-Spring 2020: Diversity Action Committee member.
- Spring 2018: Co-facilitated Curry's Common Read discussion with Joanna Williams.
- Fall 2015: Curry Global/International Advisory Committee and Curry Global Networking Research Group.
- Summer 2014/2015: Proposal Reviewer for Dean's Research and Development Grants. Reviewed four proposals each summer.
- Spring 2014: Faculty Marshall at Curry School Graduation Ceremony.
- Fall 2013-Fall 2015: Curry Physical Plant Advisory Committee.

Department of Curriculum, Instruction & Special Education:

- Fall 2016-2020: CISE Representative for Diversity Action Committee (DAC).
- Spring 2019: Search committee: NTT Assistant/Associate Professor of Education
- Spring 2016: Search committee: NTT Associate Professor/Director of Innovation.
- Fall 2015: Search Committee: NTT Assistant Professor Gifted Education.
- Fall 2015: Science Education Research Group
- Spring 2015: Prelim Exam Committee member for Meredith McCool (Ed.D).
- Fall 2014: Preliminary Exams Committee
- Fall 2013-Spr 2014: STEM Education Committee
- Fall 2013-Fall 2016: Secondary Teacher Education committee.

Online MEd & EdD Programs:

- Spring 2023: Academic Advisor for Jimmy Edwards' Field Study project (EdD)
- Spring 2022: Committee for Laura Casdorff's Field Study project (EdD).
- Fall 2015-Present: - Academic Advisor, Online MEd Science Education area of emphasis.  
- Committee member, Online MEd Online program.  
- Reviewer for Online MEd candidate applications in Science Education and Instructional Technology areas.  
- MEd Comp Exam Reader for MEd students in Science Education area, and Instructional technology.

**Southern Illinois University, USA:**

- 2010-2013: Program Coordinator for Biology Teacher Education Accreditation.  
Spring 2012: Doctoral Research Award Committee.  
2010-2013: Internal Research Consultant: Partnership for Improved Achievement in Science through Computational Science (PIASCS) program; and Southern Illinois Partnership for Achievement in Mathematics and Science (SIPAMS) program.  
2007-2013: Project Coordinator: Science, Mathematics & Action Research for Teachers (SMART) Program.  
2007-2013: Math & Science Education Project Planning Committee (SMART program).  
2007-2013: Teaching Excellence in Mathematics and Science (TEMS) Scholarships Committee.

**University of Zambia (Southern Africa):**

- 2000-2002: Biology Teacher Education coordinator.

**Charlottesville-Area K-12 Schools:**

- Fall 2013-Spring 2014: Science Curriculum Planning Committee. Buford Middle School's Science & Engineering Academy. Charlottesville, Virginia, USA.

**VI. HONORS AND AWARDS:**

- 2002-2006: Graduate Assistantship for doctoral studies, Illinois State University, USA.  
1999-2000: Zambian & Belgian Governments Scholarship for my MSc Studies.  
1994-1996: Outstanding Undergraduate Biology & Chemistry student, University of Zambia.  
1993-1996: Zambian Government Scholarship for my BSc studies.