

CURRICULUM VITAE

John Mungai Njoroge, Ph.D.

P. O. Box 1765 - 60100 Embu, Kenya

Tel: +254 722 280 292

mungainjoroge77@gmail.com

CURRENT POSITION AND RESPONSIBILITIES

National Trainer, Centre for Mathematics, Science and Technology Education in Africa (CEMASTEА).

Main responsibilities:

- Design, implementation, and Monitoring & Evaluation of Teacher Professional Development programs.
- Deputy Coordinator Research, Development – Knowledge Management program at CEMASTEА.
- Co-coordinator, Collaborative Lesson Research (CLR) project.

RESEARCH INTERESTS

Dr. Njoroge's research agenda and interests focuses on Teacher Education, Teacher Professional Development, Information Communication and Technology Integration in Teaching and Learning, Mathematics and Science Education, Teacher Mentoring, Educational Guidance and Counseling, and Teaching and leadership for Social Justice. Research methodologies interests include Mixed Methods Inquiry and Collaborative Action Research.

EDUCATION

- 2017 Doctor of Philosophy (Ph.D.), Teaching and Curriculum, Syracuse University, School of Education, Department of Teaching and Leadership. Title of Dissertation: *Examining Mathematical Knowledge for Teaching: An exploratory study of prospective teachers' transition of knowledge to practice in clinical simulations.*
- 2011 Master of Education (M.Ed.), Teacher Education, Aga Khan University. Title of Dissertation: *Preparing Science and Mathematics Teacher Educators for ICT Integration: A Comparative Analysis.*
- 2006 Master of Education (M.Ed.), Guidance and Counseling, Kenyatta University. Title of Dissertation: *Exploration Study of Guidance and Counselling Influence on Adolescents' Maladaptive Behaviors in Maragua District Secondary Schools.*
- 2000 Bachelor of Education (B.Ed.), Science - Mathematics and Chemistry, Kenyatta University, Second Class Honours Upper Division.
- 1995 Kenya Certificate of Secondary Education.
- 1991 Kenya Certificate of Primary Education.

OTHER EDUCATIONAL TRAINING

- 2021 Senior Management Course, Kenya School of Government, Embu Campus (Course in progress from January 11th – February 5th)
- 2018 Certificate in Trainer of Trainee, Kenya School of Government, Embu Campus.
- 2017 Certificate in Quality Management Systems, ISO 9001:2015 Lead Auditors Course. National Quality Institute, Kenya Bureau of Standards.
- 2016 Certificate in University Teaching, Future Professoriate Program. Syracuse University, School of Education. Recognition of excellence in professional preparation for an academic career.
- 2011 Improvement of Lesson Evaluation in Science for English – Speaking Sub-Sahara African Countries, Japan International Cooperation Agency (JICA), Osaka (September, 2011), Japan.

PROFESSIONAL EXPERIENCE

Teacher Professional Development

- 2010 – Present **National Trainer**, Centre for Mathematics, Science and Technology Education in Africa (CEMASTE). Develop courses and instructional materials for In-service Education and Trainings (INSETs) of science and mathematics teachers, Monitoring and evaluation of INSETs, Research and development program, Teacher Mentoring, Develop international training programs for teachers.

University Teaching

- 2018 – 2020 Mentor, School of Education and Social Sciences, University of Embu.
Undergraduate Courses: TCT 201: Instructional Technology; TCT 102: General Instructional Methods; TCT 330: Instructional Methods (Mathematics)
Post Graduate Diploma in Education: ECT 530: Instructional Methods (Mathematics)
Graduate Courses: ECT 707: Theories of Learning and Instruction; ECT 717: Philosophy of Science; ECT 716: Curriculum Design and Development in Science and Mathematics; TAP 540: Theories and Concepts in Educational Planning.
- 2014 – 2017 Graduate Teaching Assistant, Department of Teaching and Leadership, School of Education, Syracuse University.
Undergraduate Courses: EDU 304: Study of Teaching; EDU 204: Learning in Inclusive Classrooms; EDU 300: Media, Democracy & Social Issues
- 2013 – 2017 Graduate Teaching Assistant, Department of Mathematics, The College of Arts and Sciences, Syracuse University.
Undergraduate Mathematics Courses: MAT 194 – Pre-Calculus

Dissertation Supervision:

- 2019 – Ph.D. Thesis supervision, School of Education and Social Sciences, University of Embu, Kenya. Kaviatu G. G. (Research proposal in-progress): Drug abuse management and academic performance among secondary school students in Embu and Tharaka Nithi Counties in Kenya.
- 2020 – M.Ed. Thesis supervision, School of Education and Social Sciences, University of Embu, Kenya. Muriuki Erick Miano. (Research proposal in-progress): Integration of Geogebra in the teaching and learning of algebra concepts in public secondary schools of Kirinyaga West Sub-County, Kenya.
- 2020 – M.Ed. Thesis supervision, School of Education and Social Sciences, University of Embu, Kenya. Nzomo Christine Mueni. (Research proposal in-progress): The impact of availability and utilization of Chemistry laboratory facilities on students' academic achievement in Chemistry in secondary schools in Kathonzweni Sub-County, Kenya
- 2020 – M.Ed. Thesis supervision, School of Education and Social Sciences, University of Embu, Kenya. Beatrice W. Njogu. (Research proposal in-progress): Effects of the change of the academic calendar due to Covid-19 on the mindset of secondary school students in Kenya

Research projects

- 2020 - Classroom climate research project (CCRP). A Co-Principal Investigator in a collaborative professional development research project between Curtin University, Australia and CEMASTEAs, Kenya (Research in progress – conceptualization stage)
- 2020 - Teaching and learning during COVID-19 in Kenya: Perspectives of secondary school mathematics and science teachers” A Co-Principal Investigator in the research project by CEMASTEAs Research and Development Department, Kenya.
- 2019 – Research project proposals forwarded to two Schools of Education for consideration:
- Enhancing prospective teachers' preparedness to implement Competency Based Curriculum: A collaborative lesson research. School of Education and Social Sciences, University of Embu, Kenya. (Submitted, October, 2019)
 - Enhancing prospective teachers' preparedness to implement Competency Based Curriculum: A collaborative lesson research. School of Education, (CTIE), Tangaza University College. (Submitted, November, 2019)
- 2014 – 2017 Graduate Research Assistant, Department of Teaching and Leadership, School of Education, Syracuse University. Research Projects: Enhancing high school students' transition to college; Integration of clinical simulations in teacher preparation.

Secondary School Teacher

2001 – 2010 Njiiri School. Classroom teacher, School counseling (Ag. Head of Guidance and Counseling), House Master (in- charge of students' boarding welfare).

AWARDS AND HONORS

- 2018 \$450 Conference Grant by CEMASTEА. 1st Annual International Conference on Decolonizing Education (6th – 8th June, 2018), University of Embu, Kenya.
- 2017 \$650 Conference Grant Syracuse University, School of Education International Conference on Education (18th – 20th July, 2017) at Kenyatta University, Kenya.
- 2016 \$1000 Syracuse University, School of Education Creative & Research Grant. Project: Examining Mentor Teachers' Mathematical Knowledge for Teaching.
- 2015 Phi Beta Delta International. Alpha Sigma Chapter, Syracuse University. Inducted for excellence in academic performance and commitment to internationalization on campus.

PUBLICATIONS

- Njoroge, J. M. (2015). Quality preparation of mathematics and science teachers to integrate ICT: Lessons from learner – centered teacher professional development approach. In F. Nafukho, H. M. A. Muyia, & B. Irby, (Eds.), *Handbook of Research on Innovative Technology Integration in Higher Education* (pp. 29 – 53). Hershey, PA: IGI Global.
- Njoroge, J. M. (2015). Enhancing school counselor' conflict management strategies. In M. Luke & K. M. Goodrich (Eds.), *Group experts share their favorite activities for supervision* (Vol. 2, pp. 187 – 192). Alexandria, VA: Association for Specialists Group Work.
- Njoroge, J. M. & Njiru, S. N. (2014). Professional Development of Mathematics and Science Teachers: The Role of Universities in Kenya. In F. Nafukho, H. M. A. Muyia, & B. Irby (Eds.), *Governance and transformations of universities in Africa: A Global Perspective* (pp. 91 – 103). Charlotte, NC: Information Age Publishing, Inc.
- Gathumbi, A. W., **Njoroge, J. M.**, & Hintze, D. L. (2013). Towards Comprehensive Professional Development of Teachers: The Case of Kenya. *International Journal of Process education*, 5(1), 3 – 14.

MANUSCRIPTS UNDER REVIEW FOR PUBLICATION

- Njoroge, J. M. (2020). Transformational leadership in teacher education: A Kenyan educator's perspective. In A. Lopez & E. Olan (Eds.), *Re-Imagining transformative leadership in teacher education*. Charlotte, NC: Information Age Publishing, Inc. (Manuscript undergoing second review, publication expected in June, 2020).
- Njoroge, J. M. (2020). What learner engagement is and isn't. In CEMASTEА (Eds.), *Learner engagement in Competency Based Curriculum: A practical guide*. (Manuscript accepted for publication by Jomo Kenyatta Foundation (JKF) Educational Publishers JKF/PUB/P/16/Vol.IV/268. Revisions underway).

WORKS IN PROGRESS

- Njoroge, J. M. (2020). *Rendering blended teaching and learning: Case of Trimester experience - Department of Education, UoEm.*
- Njoroge, J. M. & Orado, G. N. (2020). *Teachers' competencies and perception on the use of portfolio.*
- Njoroge, J. M. (2020). *Exploring school-based teacher professional development: A case of lesson study implementation in selected counties in Kenya*
- Njoroge, J. M. (2020). *The role of clinical simulations in enhancing prospective teachers' preparedness for professional practice.*
- Njoroge, J. M. (2020). *Exploring prospective teacher educators' teaching assistantship experiences and perceived learning to integrate ICT in teacher education.*

CONFERENCE PRESENTATIONS

- Orado, G., Njoroge, J. M., & Akatsa, J. L. (2019). Education for sustainable development through teacher professional development: Lessons from the SMASE Program, CEMASTE. Paper presented at the 6th International Annual October Conference on Education and lifelong learning, Kenyatta University, (October, 2019), Kenya.
- Njoroge, J. M. (2018). *Examining prospective teachers' mathematical knowledge for teaching through clinical simulations.* Paper presented at the 1st Annual International Conference on Decolonizing Education, University of Embu, Embu (June, 2018), Kenya.
- Njeri, S. M. & Njoroge, J. M. (2018) *Teachers' and learners' voices in a teaching and learning environment: A case study of one school in Kisii.* Paper presented at the 1st Annual International Conference on Decolonizing Education, University of Embu, Embu (June, 2018), Kenya.
- Njoroge, J. M. (2017). *Prospective teacher educators' learning to integrate Information Communication Technology: Perspectives on teaching assistantship experiences.* Paper presented at the 5th International Conference on Education, Kenyatta University, Nairobi (July, 2017), Kenya.
- Njoroge, J. M. (2012). *Refocusing teacher education: A paradigm shift towards professional development of teachers.* Paper presented at the International Conference on Education, Catholic University of Eastern Africa, Nairobi (June 2012), Kenya.
- Njoroge, J. M. (2012). *Moral Education in Schools: Is at a Worthy Undertaking?* Paper presented at the International Conference on Education, Catholic University of Eastern Africa, Nairobi (June 2012), Kenya.
- Njoroge, J. M. (2012). *Professional Development of Science and Mathematics Teachers: Which way for Kenya?* Paper presented at International Conference on Education, Kenyatta University, Nairobi (February 2012), Kenya.
- Njoroge, J. M. (2011). *Quality Preparation of Mathematics and Science Teachers for ICT Integration: Lessons from Learner Centered Teacher Professional Development.* Paper presented at the 2nd International Conference on Education. Kenyatta University, Nairobi (July 2011), Kenya. (please note that this is a published conference proceedings)

WORKSHOPS

Njoroge, J. M. (2016). *Mixed Methods Inquiry: Tips and Pitfalls*. Lead discussant on Mixed Methods Inquiry session during a Doctoral Students' Workshop organized by Kenyatta University and Syracuse University. Kenyatta University, Nairobi (July 2016), Kenya.

TEACHER PROFESSIONAL DEVELOPMENT FACILITATION

- 2020 Online CEMASTEIA National Secondary INSET 2020. Theme: Innovative teaching and learning for critical thinking and problem solving. Sessions: (1) Pedagogies for critical thinking and problem solving. (2) Electrochemistry
- 2020 Trainer of Trainers, Secondary Education Quality Improvement Project (SEQIP). Government of Kenya and World Bank funded project. Sessions facilitated: *School Based Teacher Support System (SBTSS) Design, SBTSS Teachers Guide Primary Science – Soil Drainage, Effective teaching and learning strategies in Mathematics and Science*.
- 2019 *Rationale for STEM Education Program, Creativity and Innovation, STEM Education Monitoring & Evaluation Framework*. Three professional development session papers presented to practicing secondary school teachers during the STEM Education INSET workshop by the Centre for Mathematics, Science and Technology Education in Africa held at Embu County, Kenya (December, 2019)
- 2019 Learner – Centered Strategies Teaching and Learning Strategies: Metals. Professional development session paper presented to practicing secondary school teachers during the 2019 National INSET by the Centre for Mathematics, Science and Technology Education in Africa at CEMASTEIA (February, 2019)
- 2018 *Building, Coding, and Programming of Lego Mindstorms EV3 Robotic Kit*. A session facilitated to Teachers during the Science, Technology, Engineering and Mathematics (STEM) workshop on robotics by the Centre for Mathematics, Science and Technology Education in Africa, Embu County (13th – 17th August, 2018), Kenya.
- 2018 *Introduction to ICT Integration in Teaching and Learning*. INSET session paper presented to practicing secondary school teachers during professional development workshops by the Centre for Mathematics, Science and Technology Education in Africa INSET at Murang'a (December, 2019), Bungoma (December, 2017), Kwale (February, 2018), Busia (May, 2018), Tharaka – Nithi (July/August, 2018), and Embu (August, 2018) Counties, Kenya.
- 2018 *Inquiry Based Learning using 5E instructional model: Rate of reactions*. Professional development session paper presented to practicing secondary school teachers during the 2018 National INSET by the Centre for Mathematics, Science and Technology Education in Africa at Nyandarua (February, 2018) and Embu (April, 2018) Counties, Kenya.
- 2018 *Peace Education*. Professional development session paper presented to practicing secondary school teachers during the 2018 National INSET by the Centre for Mathematics, Science and Technology Education in Africa at Embu County (April, 2018), Kenya.

- 2017 *Science, Technology, Engineering and Mathematics (STEM) Interdisciplinary Approach*. Professional development session paper presented to practicing secondary school teachers during the STEM sensitization INSET workshop by the Centre for Mathematics, Science and Technology Education in Africa held at Mombasa County (August 2017), Kenya.
- 2017 *STEM Education Policy Framework*. Professional development session paper presented to practicing secondary school teachers during the STEM sensitization INSET workshop by the Centre for Mathematics, Science and Technology Education in Africa held at Mombasa County (August 2017), Kenya.

UNIVERSITY SERVICE

- 2019- 2020 Course development for Master of Education (Curriculum & Instruction) Programme, School of Education, University of Embu.
Courses developed: ECT 705: Theories of Learning and Instruction; ECT 721: Methods and Resources in Mathematics
Courses assisted in developing: ECT 717: Philosophy of Science; ECT 716: Curriculum Design and Development in Science and Mathematics; ECT 706: Teacher Professional Development.
- 2019 Lead facilitator for the School of Education during a training of Faculty on Competency Based Curriculum at University of Embu (19th November, 2019). Topics covered: (a) Effective classroom practices for CBC, (b) Designing Competency Based Instructions.
- 2019 Discussant at the 1st consultative forum for all Deans of Schools of Education in Universities in Kenya, held on 14th to 15th August 2019 at University of Embu
- 2019 Stakeholders forum, School of Education & Social Sciences, University of Embu
- 2017 Served in the conference organizing committee, School of Education, Syracuse University. 5th International Conference on Education by Kenyatta University and Syracuse University (July, 2016).
- 2016 Served in the Doctoral Students' Workshop organizing committee, School of Education, Syracuse University. Workshop organized by Kenyatta University and Syracuse University. Kenyatta University, Nairobi (July 2016), Kenya.
- 2016 Alternate Teaching Mentor, Teaching Mentors Orientation Program, Graduate School, Syracuse University. Preparation of Academic Integrity session for facilitation to new International Teaching Assistants.

SERVICE TO ACADEMIC COMMUNITY

- 2019 – Present Deputy Coordinator, Research and Development Department – Centre for Mathematics, Science and Technology Education in Africa
- 2018 Chair of the committee for planning CEMASTEAs 2nd Conference on Mathematics, science and Technology Education (2018 – 2019 financial year)
- 2015 – Present Regular peer reviewer for the African Educational Research Journal (AERJ; www.netjournals.org)
- 2005 – 2008 Enhancing students' accessibility to Guidance and Counseling personnel services. Njiiri School, Kenya.
- 2005 – 2008 Chairman Njiiri Teachers Welfare Committee, Murang'a County, Kenya.

2004 – 2008. Academic committee member, Njiiri School. Designing and coordinating academic programs. Initiating "Step-Up" program for improving students' academic achievement. Murang'a County, Kenya.

COMMUNITY SERVICE

2019 – Present Board of Management, Kangaru Girls School. Chairperson, Academic and Standards Committee.

2014 – Present Coordination of African international graduate student linkage. All Saints Church, 1342 Lancaster Avenue, Syracuse, N.Y. 13210, U.S.A.

2013 to Present Volunteer English – Kiswahili translator to the African Refugees and Immigrants from Congo. All Saints Church, 1342 Lancaster Avenue, Syracuse, N.Y. 13210, U.S.A.

2013 – 2017 Volunteer academic tutor, young adults mentor, and coordination of parish van transportation ministry. All Saints Church, 1342 Lancaster Avenue, Syracuse, N.Y. 13210, U.S.A.

2002 – 2008 Young adult mentor. St. Peter and Paul Catholic Church, Kangari Parish, Murang'a County, Kenya.