

CURRICULUM VITAE

DR. SIMON KARUKU

CONTACT INFORMATION

Embu University College
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EDUCATION

2013 Doctor of Philosophy, University of Alberta
2008 Master of Science, University of Manitoba
2002 Master of Science, Kenyatta University
2000 Bachelor of Education, Kenyatta University

PROFESSIONAL EXPERIENCE

2014 - Present Lecturer, Embu University College
2012 - 2014 Lecturer, Aga Khan University
2009 - 2012 Research Assistant, University of Alberta
2006 - 2008 Teaching Assistant, University of Manitoba
2002 - 2006 Tutorial Fellow, Kenyatta University
2001 - 2002 Graduate Assistant, Kenyatta University

ACADEMIC AWARDS, SCHOLARSHIPS & GRANTS

2012 Myer Horowitz Travel Award, University of Alberta
2012 Professional Development Grant, University of Alberta
2011 Tom Kieren Graduate Scholarship in Mathematics Education, University of Alberta
2011 International Internship Award, Aga Khan University
2010 Annual Conference Travel Award, Canadian Mathematics Education Study Group
2006 International Student Entrance Scholarship, University of Manitoba
2001 DRIP/ARPPIS Scholar, International Centre of Insect Physiology and Ecology

MASTER'S STUDENTS SUPERVISION

	Student's Name	Thesis Title	Institution	Status
1	Njiru, S. M.	An exploration of the factors that contribute to low students' performance in physics: A case of a public secondary school in Embu County, Kenya	Aga Khan University	Completed 2014
2	Nyongesa, G. W.	Implementation of secondary school strategic plan: A case study	Aga Khan University	Completed 2014
3	Nsamba, M.	Head teacher's role in the utilization of universal primary education funds: A case of Bigandu Primary School in Uganda	Aga Khan University	Completed 2014

4	Mwangi, F. K.	Meeting the INSET needs of mathematics teachers: Lessons from the SMASE Programme in Kenya	Aga Khan University	Completed 2013
5	Ogola, M.	Teachers' experiences of supporting students who are struggling to learn science: A phenomenological inquiry	Aga Khan University	Completed 2013

PUBLICATIONS

➤ **Peer-Reviewed Journal Articles**

Njiru, S. M. & Karuku, S. (2015). An exploration of factors that contribute to low performance in physics: A case of a secondary school in Kenya. *International Journal of Innovation and Scientific Research*, 17(2), 381-390.

Halai, A. & Karuku, S. (2013). Implementing language-in-education policy in multilingual mathematics classrooms: Pedagogical implications. *Eurasia Journal of Mathematics, Science & Technology Education*, 9(1), 23-32.

Kibua, T. K. & Karuku, M. (2006). Some results on nonparametric estimation of variance function. *East African Journal of Physical Sciences*, 7(1), 51-64.

Kibua, T. K. & Karuku, M. (2006). Bandwidth selection in smoothing functions. *East African Journal of Statistics*, 1(2), 161-174.

➤ **Book Chapters (Refereed)**

Karuku, S. & Tennant, G. (2016). Towards a harmonized curriculum in East Africa: A comparative perspective of the intended secondary school mathematics curriculum in Kenya, Rwanda, Tanzania and Uganda. In A. Halai & G. Tennant (Eds.), *Mathematics education in East Africa: Towards harmonization and enhancement of education quality (Springer Briefs in Education)* (pp. 9-25). Dordrecht, The Netherlands: Springer International Publishing.

Mohamed, M., Halai, A. & Karuku, S. (2016). Issues for quality enhancement and harmonization of education in East Africa. In A. Halai & G. Tennant (Eds.), *Mathematics education in East Africa: Towards harmonization and enhancement of education quality (Springer Briefs in Education)* (pp. 1-7). Dordrecht, The Netherlands: Springer International Publishing.

Pegg, J., & Karuku, S. (2012). Explanatory reasoning in junior high science textbooks. In S. P. Norris (Ed.), *Reading for evidence and interpreting visualizations in mathematics and science education* (pp. 65-81). Rotterdam, The Netherlands: Sense Publishers.

➤ **Conference/Seminar Papers & Invited Lectures**

Karuku, S. & Tennant, G. (2014, September 2). Comparative analysis of secondary school mathematics curriculum in Kenya, Rwanda, Tanzania and Uganda. Paper presented in the 4th Capacity and Network Project Workshop, September 1–12, 2014, Dar es Salaam, Tanzania.

Karuku, S. (2013). Accessing the other's lived mathematical experience: Experiences from the "field". In M. V. Martinez & A. C. Superfine (Eds.), *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1309). Chicago, IL: University of Illinois at Chicago.

- Karuku, S. (2013). What's in a mathematics lesson? An exchange or a gift? In S. K. Kwofie, M. B. Ogunniyi, O. Amosun, K. R. Langenhoven & S. Dinie (Eds.), *Proceedings of the 21st annual meeting of the Southern African Association for Research in Mathematics, Science and Technology Education* (pp. 76-78). Bellville, Cape Town: University of the Western Cape.
- Karuku, S. & Simmt, E. (2012). Students' experiences of seeking injustice-induced help in a mathematics classroom. In L. R. van Zoest, J.-J. Lo, & J. L. Kratky (Eds.), *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 347-350). Kalamazoo, MI: Western Michigan University.
- Halai, A. & Karuku, S. (2012). Learning mathematics in multilingual classrooms: Policies and practice. *Proceedings of the 12th International Congress on Mathematics Education* (pp. 6118-6127). Seoul, Korea: International Congress on Mathematics Education.
- Karuku, S. (2010). Reasoning demands in mathematics textbooks. In P. Liljedahl, S. Oesterle & D. Allan (Eds.), *Proceedings of the 2010 annual meeting of the Canadian Mathematics Education Study Group* (p. 219). Burnaby, BC: Simon Fraser University.
- Karuku, S. (2012, October 31). Glimpses of the Kenyan and Tanzanian education systems. Invited lecture given to the third year Bachelor of Education students at the Grand Valley State University, Allendale, Michigan, USA.
- Karuku, S. (2012, July 26). *The gift of pedagogy: Implications for mathematics teaching*. Paper presented at the 2nd International Mathematics Research Meeting. July 23-27, 2012. Nairobi, Kenya: Strathmore University.
- Pegg, J. & Karuku, S. (2012, May 29). *Opportunities for reasoning about explanations in junior high science curricular materials*. Paper presented at the 40th annual conference of the Canadian Society for the Study of Education (CSSE). May 27-30, 2012, Waterloo, ON: Wilfrid Laurier University.
- Karuku, S. (2011, November 25). *A comparative analysis of syllabuses for grades 1-9 in Canada (Alberta), Kenya and Tanzania with particular reference to mathematics*. Paper presented in the Research Seminar Series, Institute for Educational Development–East Africa, Aga Khan University, Dar es Salaam, Tanzania.
- Karuku, S. (2011, May 27). *Seeking help that helps: Lived experiences of Canadian mathematics students*. Paper presented in the Curriculum and Pedagogy Institute Seminar Series, University of Alberta, Canada.
- Pegg, J. & Karuku, S. (2010, November 20). *Using science textbook and laboratory resources to engage students in constructing scientific explanations*. Paper presented at the annual conference of the Alberta Teachers Association Science Council. Edmonton, Canada.
- Karuku, S. (2010, October 22). *Reasoning demands in mathematics textbooks*. Paper presented at the annual conference of Mathematics Council of the Alberta Teachers Association. Calgary, Canada.
- Karuku, S. (2008, May 7). *Some graph-theoretic methods in dynamical systems analysis*. Paper presented at the GRACE Student Workshop in Mathematics. Brandon University, Canada.

CONSULTANCIES

- 2013 – 2014** Review Consultant for Aga Khan Foundation on the Reading to Learn (RtL) Numeracy Program in East Africa

SERVICE AND ADMINISTRATIVE EXPERIENCE

- 2015 – Present** Examinations Coordinator, Department of Education and Social Sciences, Embu University College
- 2015 – Present** Member, Environmental, Health and Safety Committee, Embu University College
- 2015 – Present** Member, School Board of Postgraduate Studies, School of Pure and Applied Sciences, Embu University College
- Nov. 2 –24, 2015** Acting Chair, Department of Education and Social Sciences, Embu University College
- June 2 –30, 2015** Acting Chair, Department of Education and Social Sciences, Embu University College
- March 3 –15, 2015** Acting Chair, Department of Education and Social Sciences, Embu University College
- 2013 – 2014** Member, Disciplinary Committee, Institute for Educational Development, Aga Khan University
- 2013 – 2014** Member, Local Organizing Committee, 4th Capacity and Network Project (CANP4)