

## CURRICULUM VITAE

### Personal Details

Name: Dr. John Kung'u  
Date of birth: 19-06-1980  
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### Academic Qualifications

- i) Ph.D. in Statistics, 2023, Kenyatta University.  
Thesis Title: Classical and Bayesian Approaches for the Zero-Inflated Dynamic Categorical Panel Ordered Probit Model.
- ii) Master of Science in Statistics, 2011, Kenyatta University.
- iii) Certification in Strategic Management and Leadership, 2021, Kenya Institute of Management.
- iv) Certification in Monitoring and Evaluation, 2014, Kenya Institute of Management.
- v) Bachelor of Education in Science (Second upper-class Honors), 2006, Moi University.
- vi) Certificate in Computer and Basic Maintenance, 2004, Karencom Computer Centre.
- vii) Kenya Certificate of Secondary Education, 2000, Musa Gitau secondary school.
- viii) Kenya Certificate of Primary Education, 1997, Rungiri primary school.

### Professional Qualifications

- i) CBEC KEMRI-Bioethics Training Initiative. Certificate of participation June 2024
- ii) Certificate of Completion. Cybersecurity Awareness, 2024, Kenya Education Network (KENET)
- iii) Certificate of Participation. Introduction to Competency-based Curriculum (CBC), 2023, Teaching Through Technology (T3) Alliance, an organization based in Alaska, USA in collaboration with Laikipia University. <https://laikipia.ac.ke/article/mou-signing-ceremony-between-laikipia-university-and-t3-alliance>
- iv) Competency-based curriculum (CBC) and Competency-based assessment (CBA), 2022, induction, Teacher Service Commission.
- v) Centre for Mathematics, Science Technology Education in Africa (CEMASTE), 2021, conducting online classrooms such as Google Classroom, Microsoft Teams, Virtual Laboratory, simulation and animations.
- vi) Certification in Strategic Management and Leadership, 2021, Kenya Institute of Management.
- vii) Certification in Monitoring and Evaluation, 2014, Kenya Institute of Management.
- viii) Certificate of Participation. Performance Appraisal and Role of HOD in Curriculum Implementation, 2016, Teacher Service Commission.
- ix) Certificate of Participation. Mathematics 121/2 (K. C. S. E Examiner), 2013, Kenya National Examination Council.
- x) Strengthening of Mathematics and Sciences in Secondary Education (SMASSE), 2016, Problem-based Learning, Communication and Collaboration, 2012, Integration of

Technology (I. C. T) in Learning, 2010, Plan, Do, See and Improve (P. D. S .I) Activity, Student, Experiment and Improvisation (A. S. E. I).

### **Professional Affiliation**

Registered associate member of Kenya Institute of Management (M-47049).

### **Membership**

Institutional Ethics Review Committee, Murang'a University of Technology.

### **Learning Module**

Kung'u, J. Introduction to Statistical Package for Social Sciences (SPSS).

### **Seminar**

45<sup>th</sup> Postgraduate Webinar for Ph.D. Graduands (July 2023) Kenyatta University Graduate School. Theme: *“Research and Innovation for Social and Economic Development”*

### **Presentation at Conference** (Contribution ID: 40)

8th Annual Kabarak University International Conference on Emerging Trends and Issues in Education held in 2018. Authors: Chumba, G. and **Kung'u, J.** Title: Modified Regression Type Estimators in the Presence of Non-Response in Two-Phase Sampling.

### **Workshop**

Introduction to Competency-based curriculum (CBC), 22<sup>nd</sup> -24<sup>th</sup> August 2023 held at Laikipia University and conducted by Teaching Through Technology (T3) Alliance, an organization based in Alaska, USA. Discussion and presentations of CBC approaches in lecture halls.

### **Work Experiences**

2024-Present: Lectuer Murang'a University of Technology. (Developing content for the units allocated, developing teaching materials such as data (empirical and simulated), programming codes, questionnaires, teaching, setting examination and marking, Internal examination moderation, curriculum review, attending departmental meetings and academic advice) at Degree, Master and PhD levels.

2011- Present: Data analysis for postgraduate students in statistics, education, psychology, and business using Microsoft Excel (data entry), Statistical Package for Social Science (SPSS), STATA and R program.

2012–Present: Part-time Lecturer at Laikipia University (Developing content for the units allocated, developing teaching materials such as data (empirical and simulated), programming codes, questionnaires, teaching, setting examination and marking, Internal examination moderation, curriculum review, attending departmental meetings and academic advice) at Certificate, Diploma, Degree and Master Levels (MBAD 681 Quantitative Techniques).

2015–2016: Part-time Lecturer at Kenya Methodist University (Developing content for the units allocated, developing teaching materials, teaching, evaluation and academic advice) at Diploma and Degree levels.

January 2017- March 2020: Part-time Lecturer at Kenya Institute of Management (Developing content for the units allocated, developing teaching materials, teaching and evaluation of statistical and mathematical units) at the Diploma level.

2008–February 2024: Longonot Township secondary school (Mathematics and Physics). (Teaching, career advice, organizing mathematics contests, guidance and counselling, supervising science fair projects, sports and Timetabling using aSc software).

2014-2019 Marking Mathematics paper 121/2 in Kenya National examination council.

2017-March 2020: Successfully supervised and evaluated Diploma Thesis/Projects at the Kenya Institute of Management Naivasha branch.

2014-2023 Assessing Bachelor of Science (Statistics) students during their field attachment and writing assessment reports.

July-August 2022, February-March 2013 and September and October 2017 Support Election Trainer in Naivasha (Training Presiding, Deputy Presiding and Clerks for 2013 General Elections) and Presiding Officer at Kijabi primary school, Lakeview primary school, Mirera primary school and Longonot E. C. D. Custodian of electoral materials, management of electoral processes in the polling station, supervising the counting and tallying processes and returning of polling materials.

2010- 2017: Assistant Treasurer/Coordinator: Mai-Mahiu Zonal Games and Sport Association. (Budgeting, coordination, allocating teachers' duties during the competition day and making payments).

2012 Supervisor of K. C. S. E at Mai Mahiu Girls Secondary School. Attending briefing sessions, conducting a rehearsal in collaboration with the invigilators, storage of examination materials, briefing candidates on how to conduct themselves during the examination, preventing and reporting the occurrence of examination irregularities, and signing declaration forms among other duties.

August 2009 Deputy presiding officer (I. I. E. B. C). Training of clerks, custodian of electoral materials, management of electoral processes in the polling station, supervising the counting and tallying processes and returning of polling materials.

2006-2007 St Francis Mukuyu-ini secondary school.

2005 Maseno High School.

### **Responsibilities**

Examination and Time Tabling Officer. Department of Mathematics and Actuarial Science, Murang'a University of Technology

Head of Mathematics Department (Longonot Township Secondary School (2012-2024)) (holding departmental meetings, setting targets, coordinating and budgeting of mathematical symposiums and science congress competitions and forwarding order of learning and teaching materials required in the department). Monitoring syllabus coverage, setting departmental targets and appraising the teachers in my department.

Head of Games Department (Longonot Township Secondary School (2014-2017)) (Coaching, budgeting, coordinating and organizing sports activities in the school and representing the Principal in the Games meeting).

Assistant Treasurer/ Coordinator: Mai-Mahiu Zonal Games and Sport Association. (Budgeting, coordination, allocating teachers' duties during the competition day and making payments).

Member of Time Tabling Committee (Preparing, editing and updating the school Timetable using aSc Timetables software).

Chairperson: In charge of investment: Longonot Township secondary school.

### **Curriculum Review (Programme Reviewed)**

- i) Bachelor of Science in Mathematics and Computer science
- ii) Bachelor of Science in Applied Statistics with Programming

### **Short Courses**

Certificate in Statistical Data Analysis Using Statistical Package for Social Sciences (SPSS), 2024, Department of Mathematics and Actuarial Science, Muranga University of Technology.

### **Skills**

- ✓ Developing scientific articles using Latex software and Math type software.
- ✓ Conducting online classroom using Google Classroom, Microsoft Teams, Virtual Laboratory, simulation and animations.
- ✓ Developing strategic plan, Implementation and evaluation matrix.
- ✓ Statistical computing skills using Excel, Statistical Package for Social Science (SPSS), STATA and R statistical program (Open source software).
- ✓ Design of online questionnaires using KoboToolbox.
- ✓ Preparation of Timetables using aSc Timetables software.
- ✓ Monitoring and evaluation of projects/programs-Developing conceptual, logical and result-based framework, work plan and report writing.
- ✓ Research skills.
- ✓ Ability to work under minimum supervision and high-stress tolerance.
- ✓ Excellent interpersonal relationships, communication and time management.

### **List of Publications**

- 1) **Kung'u, J.**, Odongo, L. and Kube, A. (2022) Classical Approach to Zero-Inflated Dynamic Panel Ordered Probit Model with an Application in Drug Abuse. *American Journal of Theoretical and Applied Statistics*. Vol. 11, No. 2, 58-74. doi: 10.11648/j.ajtas.20221102.11
- 2) **Kung'u, J.**, Kube, A. and Odongo, L. (2022) Bayesian Approach to Zero-Inflated Dynamic Panel Ordered Probit Model with an Application in Drug Abuse. *International Journal of Statistics and Applied Mathematics*, 7(2): 01-13. doi.org/10.22271/math.2022.v7.i2a.787
- 3) Chumba, G. and **Kung'u, J.** (2018) Modified Regression Type Estimators in the Presence of Non- Response in Two Phase sampling. *International Journal of Scientific Research and Management (IJSRM)*. Vol. **06**, M-2018-65-72. doi: 10.18535/ijprm/v6i7.m01.
- 4) Gitahi, J. N., **Kung'u, J.** and Odongo, L. (2017) Estimation of the Parameters of Poisson-Exponential Distribution Based on Progressively Type II Censoring Using the Expectation Maximization (EM) Algorithm. *American Journal of Theoretical and Applied Statistics*. Vol. **6**, No. 3, pp. 141-149. doi: 10.11648/j.ajtas.20170603.12.

- 5) **Kung'u, J.** and Nderitu, J. (2016) Generalized Ratio-Cum-Product Estimators for Two-Phase Sampling Using Multi-Auxiliary Variables. *Open Journal of Statistics*, **6**, 616-627. <http://dx.doi.org/10.4236/ojs.2016.64052>.
- 6) Tum, E. C., **Kung'u, J.** and Odongo, L. (2014) A New Regression Type Estimator with Two Auxiliary Variables for Single-Phase Sampling. *Open Journal of Statistics*, **4**, 789-796. <http://dx.doi.org/10.4236/ojs.2014.49074>.
- 7) Waweru, P.M., **Kung'u, J.** and Kahiri, J. (2014) Mixture Ratio Estimators Using Multi-Auxiliary Variables and Attributes for Two-Phase Sampling. *Open Journal of Statistics*, **4**, 776-788. <http://dx.doi.org/10.4236/ojs.2014.49073>.
- 8) **Kung'u, J.**, Chumba G. and Odongo, L. (2014) Mixture Regression Estimators Using Multi-Auxiliary Variables and Attributes in Two-Phase Sampling. *Open Journal of Statistics*, **4**, 355-366. <http://dx.doi.org/10.4236/ojs.2014.45035>.
- 9) Mutembei, T., **Kung'u, J.** and Ouma, C. (2014) Mixture Regression-Cum-Ratio Estimator Using Multi- Auxiliary Variables and Attributes in Single-Phase Sampling. *Open Journal of Statistics*, **4**, 367-376. <http://dx.doi.org/10.4236/ojs.2014.45036>.
- 10) **Kung'u, J.** and Odongo, L. (2014) Ratio-Cum-Product Estimator Using Multiple Auxiliary Attributes in Two-Phase Sampling. *Open Journal of Statistics*, **4**, 246-257. <http://dx.doi.org/10.4236/ojs.2014.44024>.
- 11) **Kung'u, J.** and Odongo, L. (2014) Ratio-Cum-Product Estimator Using Multiple Auxiliary Attributes in Single Phase Sampling. *Open Journal of Statistics*, **4**, 239-245. <http://dx.doi.org/10.4236/ojs.2014.4402>.

### **Hobbies**

Reading, Research, Traveling, Playing Volleyball, Listening to Music and Community Work.

### **Referees**

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