



## CURRICULUM VITAE

### 1.0 PERSONAL INFORMATION

NAME : Prof. John Nyamai Maundu  
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### 2.0 QUALIFICATIONS

#### 2.1 *Academic Qualifications*

- 1986: PhD in Science Education, McGill University, CANADA.
- 1983: MEd in Science Education, University of Nairobi, KENYA.
- 1977: BEd (Science) in Zoology, Botany and Education, University of Nairobi, KENYA

#### 2.2 *Professional Courses*

- 1969: Completed a course as a Secondary school Biology teacher at Kenyatta College, KENYA.
- 2007: Received training on use of the Blackboard software for E-Learning run by staff from North Carolina Central University, at Kenyatta University, KENYA.
- 2008: Received 3-day training on Moodle applications software at KU AVU Complex.
- 2014: Received introductory course on use of SMART BOARD at Ed Comm Tech Dept, Kenyatta University

#### 2.3 *Other courses*

- 1991: Obtained a certificate in Pedagogics at University of Leeds, UK.
- 2008: Attended a 2-day seminar on *Writing Fundable Community Project Proposals* organized by KUCOEP (Was the representative for the dept. of Educational Communication and Technology).

### 3.0 EMPLOYMENT HISTORY

- May, 2014: Associate Professor, Department of Educational Communication and Technology, Kenyatta University
- 1988-1989: Senior Lecturer, Department of Educational Communication and Technology, Kenyatta University
- 1988-1989: Lecturer, Department of Educational Communication and Technology, Kenyatta University
- 1980-1988: Tutorial Fellow, Department of Educational Communication and Technology
- 1969-72: Science tutor and Head of Science Section, Machakos Teachers' College
- 1973-74; 1977-78: Primary science curriculum developer – Kenya Institute of Education

#### 4.0 ***ADMINSTRATIVE RESPONSIBILITY AT (KU)***

##### ***4.1 At Kenyatta University***

- 4<sup>th</sup> February, 1993 -97: Ag Director of Basic Education Resource Centre, Kenyatta University
- June 5 to June 26, 1991: Acting Chairman, Ed. Comm. Tech. department, June 5 to June 26, 1991.
- Oct. 1, 2004 to June 5, 2006 : Chairman, department of Educational Communications and Technology, Kenyatta University

##### ***4.2 At Other Institutions***

- Jan 17, 1968 – March 30, 1968: Interline Clerk, East African Airways, Nairobi, KENYA.
- May 1969-Aug 1972 – Head of Science, Machakos Teachers College, KENYA.

#### 5.0 FELLOWSHIPS

None

#### 6.0 POSTGRADUATE SUPERVISION

##### **6.1 PhD Supervision**

###### **6.1.1 COMPLETED**

- **2011:** Mwangi Suleiman K., E83/15236/05: Towards – context based learning as a model for pre-service primary teacher education in Kenya: A case of Meru and Egoji Teachers Colleges
- **2014:** Zeddy C. Makatiani, E83/15334/05: Implementation of Government policies on Art Education in Primary Teachers Colleges in Kenya.

- **2015:** Michael Waititu, E83/21204/10. Impact of Group Discussion method in teaching of Physics on attitude of selected High School students in Kenya
- **2016:** Samuel Nyaga Jesse, E83/21664/12: Utilization, interface and components of digital content and their influence on biology education among selected secondary schools in Nairobi County, Kenya
- **2016:** Bala Husseini, E831/26544/2013: Code switching and achievement in Mathematics among secondary school students in Adamawa State, Nigeria.
- **July, 2018:** Judith Kinya E83/25658/2013: Influence of Computer aided instruction on students' achievement, self-efficacy and collaborative skills in Chemistry in secondary schools of Tharaka-Nithi County, Kenya.
- **July, 2019:** Eunice Owiti Atieno E83/21914/2012: Integration of ICT in the teaching and learning of Biology in secondary schools in Migori, Kenya **(07 graduates as at July, 2019)**
- **September, 2020:** Wambua Joseph Muteti E83/23586/2012: Effect of animations in E-Learning materials on student performance in Physics among selected secondary schools in Nairobi County, Kenya. **(08 students as at July, 2021)**

### 6.1.2 ONGOING

- Ong'amo Bernard Lawrence E83/27379/2014. Towards Improvement of Pedagogical Teaching of Difficult Topics in Biology through ICT Integration in Secondary schools in Mumias Sub-County, Kenya- Draft of thesis submitted to Supervisors
- Julius Jerry Agortey E83F/25092/2018 – Comparative Study of College Team and Non-Team Members participation in sports on

academic performance in university colleges of education in  
Ghana.- Proposal presented to department faculty, March, 2021

- Nickson Mweni (E83/CE/34446/2017) – Sources of mathematical learner identities and performance in Mathematics among secondary school students in Kilifi County, Kenya. Proposal presented to department faculty in March, 2021
- Lydia Igandu Njagi (E83/27336/2014)- Awaiting new proposal

**(04 students as at July, 2021)**

## **6.2 Masters Supervision**

### **6.2.1 COMPLETED**

- Kitivo Ezekiel: A study of the relationship between Kenyan Secondary School Pupils' Achievement Motivation and Educational/Occupational Levels of their parents (1989)
- Twei K. Richard: A study of resources for teaching and learning of Science in some primary schools of Olenguruone Division, Nakuru District, Kenya. (1990)
- Mumbi E. King'ori : A study of Knowledge, Understanding and Practices in Health Education among Standard Seven pupils in Kibera
- Richard A. Alfayo: An evaluation of the impact of the Kenya National Students' Science and Technology Congress on the development of Biology Education (1995)
- Francisca A: Omondi Factors hindering the effectiveness of Environmental Education in Kenyan Secondary Schools: A case study of Kabarnet Division, Baringo District (1998)
- Rose A. Mwendar: A study of the teaching methods used and attitudes of teachers towards Family Life Education in secondary schools of Nairobi Province (2001)
- Florentina N: Ndeke Popularity and unpopularity factors and their relationship to academic achievement among Standard Three children in Thika Municipality, Kenya (2001)
- Mogaka D Teachers' Instructional behaviours and Learners' participation in secondary school English language classrooms in Nairobi, Kenya (2001)
- Onduru Sarah: The cognitive level of classroom instructional questions and their implications on students achievement in biology: A case of two schools(2002)
- Otieno N. Ondoro Relationship between secondary school teachers' attitudes towards Integrated English Approach and their teaching performance:A study of Rachuonyo District, Kenya (2003)

- Michael M: Waititu Teachers' and Students' perception of Topic Area difficulties in the Physics Secondary School Syllabus (2004)
- Achoki J. Mecha: Inquiry into the use of resources in the teaching of Secondary school Biology in North Kisii District, Kenya (2004)
- Ouma N. Omondi: Relationship between achievement motivation and performance in English composition writing among secondary school students in Nyando District, Kenya (2005)
- Githinji Alice: Pre-School children,s performance in prediction and hypothesizing: A case study of Isinya and Ngong Divisions in Kajiado District, Kenya (2008)
- Samuel N Jesse: Computer Assisted Instruction and Conventional Instructional Methods in Science: A Comparative study of Secondary Schools in Embu District, Kenya (2011)
- Ndolo L. Musau E55/CE/24232/2012. Influence of Integration of Information Communication Technology in teaching Biology on student performance in Makueni County secondary schools, Kenya.
- Ekaliyo J. Ekaale E55/CE/1074/06: Organizational writing skill – based teaching and students' performance in English essays in selected secondary schools in Turkana County, Kenya (2014)
- Lydia Njagi Igandu E55/CE/15616/08: Factors that affect performance in Mathematics in Embu West Public secondary schools (2013)
- Mwanda Gideon E55/CE/13685/09: Utilisation of computer technology in Teaching and learning Biology in secondary schools in Rachuonyo South District
- Cheruiyot Daniel E55/CE/14137/09: Classroom verbal interaction patterns in relation to student performance in Physics in Baringo District, Kenya
- Kenei Julia E55/CE/24310/12, Dec 2019
- Mosonik Alfred Kemei E55/25280/2014- Awaiting graduation in 2022

(22 completed as at July. 2021)

- **6.2.2 ONGOING**
- 2011 Mwawatu Benzi E55/CE/11323/07: Influence on Teaching Standards on performance in Geography in Secondary schools in Kilifi County, Kenya- Thesis submitted to supervisors
- Langat Kiprono E55/CE/20644/12 Concept paper submitted
- Kirui Samuel K. E55/CE/20642/12 Concept paper submitted
- Njeru Eric Munene E55/CE/20697/12 Concept paper under preparation
- Benard K. Kimoso- E55/CE/25880/2011 Submitted proposal Lloyd Odero E55/CE/24229/12 –Draft proposal presented at dept
- Gereka Rowland E55/CE/24227/12- Proposal submitted to Grad School

- Omuholoh Abel John E55/24594/12- Concept paper submitted
  - Tsalwa Mercy E55/CE/24226/12- Concept paper submitted
  - Mumbe Mildred W. E55/CE/24228/13- Concept paper submitted
  - Mayero Jacquelyne E55/CE/12930/09 – Draft proposal submitted
  - Kariuki Wambui E55/CE/25011/12- Concept paper submitted
  - Alice Wangui E42/CE/24489/2013-Concept paper awaited
  - David Kaguthi E55/CE/25648/14- Concept paper submitted
  - Claudia Jerotich E55/CE/28676/13- Concept paper submitted
  - Eric Mwangi A. E55/CE/26390/14- Concept paper submitted
  - Ototo Kemanigi Bonic E55/CE/26473/14- Concept paper submitted
  - Isalambo Consolata Khalayi E55/CE/23386/10- Draft proposal submitted
  - Momanyi Bethuel Misati E55/CE/ -Draft proposal submitted
  - Tonui Kipronoh Paul E55/CE/ 28608/13 –Concept paper submitted
  - Maranga Oguta Edwin E42/OL/KSU/24284/14 – Concept paper submitted
  - Mwangi Lukoa E55/CE/24288/13- Concept paper submitted
  - Stanley K. Muiruri E55/CE/34042/2017
  - Kadenyi Mercy O. E55/CE/28184/2018- Concept paper submitted
- (23 under supervision as at July. 2021)**

## **7.0 CONFERENCES/SEMINARS/WOKSHOPS**

### **7.1 Participation in Workshops/Conferences**

- Attended a National Conference on Early Childhood Education, held at Green Hills, Nyeri, Kenya in 1993
- Attended a National Symposium on Education of Girls ,at Machakos, Kenya, Garden Hotel, Machakos, 1994
- Attended an ADEA Research Orientation seminar on Non-formal education at Helderfontain, Johannesburg, S.A., 18-20 June, 1997
- Attended a conference on Non-formal education at the Bronte Hotel, Harare, Zimbabwe, 13-15 Aug., 1997
- Attended a workshop on Training Skills in Reproductive Health at the Outspan Hotel, Nyeri, Kenya, 1998
- Attended a UNICEF-sponsored workshop on Life Skills and HIV/AIDS at the Hilton Hotel, Nairobi, (17-19 July, 2000)
- Attended a workshop on teaching modules development at Blue Post Hotel, Thika, Kenya, Jan.17-18, 2002
- Participated in a Rockefeller Foundation – sponsored seminar on research methods at the Bounty Hotel, Nairobi, on 29<sup>th</sup> April, 2002
- Attended Workshop on the launching of the 11<sup>th</sup> ADEA Working Group on Mathematics and Science Education, Holiday Inn, Nairobi, Kenya (March 30-31, 2005).
- Attended ADEA/SMASSE Conference on Science and Mathematics Education, GITARAMA, Rwanda, June, 2005

- Attended departmental seminar on Anti-corruption entitled “Academic and Professional Integrity”, March, 21, 2006 held at the University’s Science Complex Boardroom.
- Attended a departmental seminar on Strengthening Science and Mathematics Education, held at the University’s Science Complex Boardroom, February, 21, 2006.
- Attended an ADEA/SMASSE Conference on Mathematics/Science Education, Saly, Senegal (May 29-June 2, 2006).
- Attended an IT training workshop at the National ICT Innovation and Integration Centre, KSTC, NRB (25-10-11).
- Attended a KU-SYRACUSE workshop on Teaching and Learning in Large Classes at KUCC, 13 Oct. 2011. Subsequently produced, with other team members, a Policy brief on the same.
- Attended a KU-SYRACUSE workshop on Handling All Learners at KUCC, 24<sup>th</sup> Oct. 2011.
- Attended HP Catalyst Summit on **Innovations in STEM (+) Learning and Teaching** in Beijing, CHINA 11-14, April, 2012.
- Attended an International conference on *Advancement of Biology Education Research* at the University of Minnesota, USA, (July 12-15, 2012)
- Attended a seminar on Time Travels – a historical concept for teaching and learning across the curriculum; held in ECT Boardroom on Tuesday, 23/6/2015

## 2 Presentation of papers at Academic and Professional Conferences

- ‘How children perceive and learn Science and Technology’, a paper presented to Science Illustrators at the British Council Library, Nairobi, 27<sup>th</sup> May, 1995
- ‘Towards meeting local training requirements of Jua Kali artisans in Kenya: Some lessons from experience’, a paper presented at the Bronte Hotel, Harare, Zimbabwe, 3-15 Aug., 1997
- *Science and Technology Across the Curriculum*”, a paper presented at a UNICEF Annual General Meeting on Networking in Gaborone, Botswana 13-23 June, 1999
- ‘Writing Research Projects for Distance Learning’ a paper presented at a modules development workshop at Blue Post, Thika, Jan.17-18, 2002
- ‘Incorporating issues of Growing Up and Sexual Maturation in Classroom Tests and National Examinations’, Kenya National

Examinations Council Workshop held at the Silver Springs Hotel, Nairobi, 29-30 March 2006

- ‘Growing up and Sexual Maturation: Some Issues in Education’, paper presented at a Teachers’ Training Workshop, Highridge Teachers College, Nairobi, Kenya, 19-23 June, 2006.]
- ‘Youth Employment in Kenya: Employability skills for socio-economic development’, a paper co-presented at an International

### 8.1

- Twoli NW, Maundu J N, (1994): Basic Education and Training of Jua Kali Artisans: A case study of Metal Work Sites in Kenya.
- Incorporation of Growing up Sexual Maturation concepts in Testing at both classroom and National Levels (2006). *African Journal of Education Studies*. Vol.1 No. 2, 71-78.
- Mwangi S, Twoli N, Maundu J, (2011): Context-Based Primary Teacher Training Model: The Way Forward for Kenya. *International Journal of Professional Practice*. Vol 2, Issue 4, 365-374.
- Maundu J N, Twoli NW, (1996) Environment and dynamics of Jua Kali metal-work as a basic informal industry in Kenya, *Kenya Journal of Education*, Vol.6, No.1, 71-83.
- Currently Member of the HP Catalyst Initiative Pedagogy 3.0 Project Team on the use of IT in the teaching of Science and Mathematics (Theme: ‘Using Technology to Support Teacher and Learner Conceptual Understanding in Mathematics and Science’)
- Currently member of the Syracuse-Kenyatta University research link team on Teacher Education (Theme: ‘Building Capacity through Quality Teacher Preparation’).
- Jesse S, Twoli N, Maundu J, (2014): **Enhancement of Science Performance through Computer-Assisted Instruction among Selected Secondary School Learners in Kenya**. *Kentucky Journal of Excellence in College Teaching and Learning* (Vol 12 )
- Samuel N. Jesse, John N. Maundu, Nicholas W. Twoli (2016). Augmented Instructional Role of the Teacher and Learner characteristics in computer assisted science lessons among secondary schools in Kenya. *International Research Journal of Management and social Sciences Vol (1) Issue (7) Year (2016)*.
- Samuel N. Jesse, John N. Maundu, Nicholas W. Twoli, Influence of curriculum digital content utilization on learners’ assessment and achievement in Biology among secondary schools in Kenya. *International Journal for innovation Education and Research*. Vol. 6 No 07 2018. ISSN 2411-3123
- Ochanji M. K. , Twoli, N. K., Bwire B., Maundu J. N. Teacher Mentoring for Effective Teacher Training and Development. *Teacher Education and Practice*, Vol. 30, No. 1. ISSN 0890-6459.
- Judith Kinya Julius, Nicholas W. Twoli, John N. Maundu. Enhancement of Chemistry Self-Efficacy of students using Computer-Aided Instruction among



Secondary school learners in Kenya. *International Journal for Innovation Education and Research*. Vol. 6 No 08 2018. ISSN: 2411-3123

- Judith K. Julius, Nicholas W. Twoli, John N. Maundu. Effect of Computer Aided Instruction on Students and Gender Achievement in Chemistry among selected secondary school students in Kenya. Vol. 9, No. 14, 2018. ISSN 2222-1735
- Bwire A., Twoli N., Maundu J. Teacher Mentoring: The key to Successful Student Teaching Practicum. *Building Capacity Through Quality Teacher Preparation: A Multi-Faced Approach*. Printed by Kenyatta University Press(KUP), 2018.
- Khatete. Twoli N., Maundu J. Integrating Technology into the Curriculum. Printed by Kenyatta University Press(KUP)
- Twoli NW, Maundu J N, (1994): Basic Education and Training of Jua Kali Artisans; case study of Metal Work Sites in Kenya.
- Wambua, J. M., Twoli NW and Maundu J. N. (2020). Effect of animations in E-Learning materials on student performance in Physics among selected secondary schools in Nairobi County, Kenya. *International Organisation for Scientific Research (OISR)*, Vol.10, Issue 3, pp. 25-32.

## 8.2 Articles in Conference proceedings

- Maundu J and Githinji A. (2011). *Youth employment in Kenya: employability skills for socioeconomic development*. In <http://cusein kenya.syr.edu>.
- Maundu J. & Kamau T. (2011). *Non-formal Education for Societal Transformation: A preliminary survey of Nairobi County*. In <http://cusein kenya.syr.edu/>

## 8.3 Books

- 2002: Muindi D, Maundu J, Kiio M, Wainaina wa Gitau, *ECT 300: Peer Teaching Module*, Institute of Open Learning, Kenyatta University.
- 2004: Maundu John, Khatete David, *ECT 304: Subject Methods-Biology*. Institute of Open Learning, Kenyatta University.
- 2005: Maundu, J., Sambili H., Muthwii, S, **Biology Education-A methodological approach** (Revised Edition) . Nairobi: Lectern Publishers.

## 8.4 Chapters in Book(s)

- Maundu, J N, Aims and Objectives of Education. In *Instructional Methods in Education*. Published by Kenya Institute of Education, Nairobi, 2007, ISBN No. 9966-31-625-6.

- Maundu, J N, Measurement and Evaluation in Education. In *Instructional Methods in Education*. Published by Kenya Institute of Education, Nairobi, 2007, ISBN No. 9966-31-625-6.
- Maundu J, The relationship between Pupil Achievement in English Language and Predictor Variables. In *Benchmarks for English Language Education*, Edited by Ted Groenewegen, Phoenix Publishers, Nairobi, 2008, ISN No. 996 302 5
- **Modules: a) written by self**
  1. ECT 825-Nature, Aims and Methods of Teaching Biology
  2. ECT 826- New Trends in Biology Education
  3. ECT 344-Subject Methods-Biology
  4. ECT 708- Subject Methods- Biology
- **b) Written jointly with other colleagues**
  1. ECT 201-Contemporary pedagogies in teacher education  
*Authors: J. Maundu, A. Bwire, M. Nasibi, H. Mulwa, J. Kimemia, M. Kiio, D. Muindi*
  2. ECT 823-Approaches and Methods of teaching science  
*Authors: G. Waweru, J. Maundu, M. Waititu*

## **9.0 NETWORKS AND COLLABORATION WITH EXTERNAL ORGANISATIONS**

- Consultant for the Republic of Rwanda on the establishment of Kigali Institute of Education (Dec. 28 1997-Jan. 11, 1998) which now offers degrees and diplomas. Consultancy by the World Bank.
- Served as Consultant for Kigali Institute of Education, RWANDA, on development of Biology Teaching Module (April 26-12, 2007). Consultancy by WOB (Belgium Govt).
- Served as consultant for World Society for the Protection of Animals on preparation of module on Animal Welfare (Sept. 2008). Consultancy by Dar es Salaam Regional Office.
- Served as a researcher in Summative Evaluation of Primary School Curriculum exercise organized by the Kenya Institute of Education, 1993.
- Undertook a mid-term evaluation of a 3-year, AKF-sponsored, Pre-School project in Kenya (jointly with G. Onyango) on behalf of the Kenya Institute of Education (1995)
- Committee Member of National Assessment of Learning Achievement (NASMLA)

## **10.0 EXTERNAL AND INTERNAL GRANTS**

- Between 2001 and 2009 was part of research team awarded funds for the English Literacy Norms Project headed by Prof Agnes Gathumbi of ECT, KU ; for 2006-2009 about KSh 49 million was awarded.

- In 2011 the HP catalyst Initiative was awarded US \$ 20,000 cash and over half million in form of equipment (computer, calculators, printer/photocopier). In April, 2012 up scaling funds (100,000 US \$) were awarded.

## **11.0 LOCAL, REGIONAL & INTERNATIONAL APPOINTMENTS**

### **11.1 External examiner in other universities**

1995-98: External Examiner for Moi University

2001-4: External Examiner for Egerton University

2000: External Examiner (Teaching Practice) for University of Nairobi –June/July,

2009-2012: External Examiner for Aga Khan University, Dar-es-Salaam

2015- 2017 External Examiner for St. Paul’s University, Limuru, Kenya.

2015- Present, External Examiner for University of Nairobi (Kikuyu Campus)

### **11.4 Appointment to Boards**

**2019 to present (2021):** Appointed as member of Board of Governors for Darajani Secondary School, Kibwezi, Kenya.

2017: Appointed Member of Board of Management for Kivuthini Secondary School, Makueni County.

## **12.0 AWARDS/RECOGNITION**

2013- Received Long Service Merit Award from Kenyatta University

2012- Recognised by Kenyatta University as one of the best achievers in performance contracting

1997- Recognised as an outstanding individual in “**WHO’S WHO Science and Technology in Education in Africa**”- an African Network for Research and Development in Science and Technology Education (page 37).

## **13.0 COMMUNITY OUTREACH**

- Vice- Chairman, Kambu Parish Council, Kibwezi, Machakos Diocese, (2019-present)
- Chairman, Darajani Catholic Church, Kambu Parish (2019-present)

- Patron of KU Kibwezi Students Association; I take them to secondary schools to give motivational talks to high schools students
- Chairman, Mito Andei Development Initiative (2003-2005)- I formed and registered a CBO during my 2004 Sabbatical Leave.

## **14.0 ACADEMIC LEADERSHIP**

### **14.1 Development of teaching/academic programmes in department/school/University**

#### **August-September 2011**

- Jointly with Dr. Njuguna and Dr. Gitome, prepared a curriculum an Induction Curriculum on Pedagogy and Examinations for Newly – employed Kenyatta University academic Staff. Document submitted to University administration in September, 2011.

### **14.2 Developing Programmes External to Kenyatta University**

Served as Team Leader for development of assessment instruments for Kenya's National Assessment System for Monitoring Learner Achievement (NASMLA) at a workshop held at the Kenya Institute of Education (March 5-9, 2007).

Participated in the review of Biology undergraduate curriculum for Kigali Institute of Education, Rwanda (2007)

### **14.3 Initiating/Leading Research Project**

#### **2010**

Jointly with others, led a project proposal writing activity; proposal was completed but not managed to secure funding yet. (*Intention is to revise it incorporating use of IT in the classroom and remarket it.*)

## **15.0 OTHERS**

### **15.1 Appointments**

i. National- Member of National Primary Science panel, KIE(1970s-1990s)

### **5.2 Contribution to University Advancement**

Team Leader and trainer of Prisons College Instructors, RUIRU, on Pedagogy, Curriculum Development and Public Relations (March 29-April 6, 2010). This not only established a meaningful **link** but also **advanced KU networking and collaboration** with non KU institutions.

### **15.3 Membership to professional Bodies**

June 2012 to June 2013- Member of the Society for the Advancement of Biology Education Research

#### **Referees**

- 1.** Prof. K. Kombo  
Dean, School of Education, Kenyatta University.
- 2.** Dr. A. Bwire  
Chair, Ed Comm Tech Dept, Kenyatta University.