Dr Collen Manganyana

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Homepage: https://collenmanganyana.owlstown.net/ **SACE Teaching Licence No:** *FN1188044*

QTS: Teacher Reference No: 2275555

Personal Profile

I am results-oriented and hardworking Mathematics teacher with over 23 years of experience teaching Mathematics and Mathematical Literacy in High schools comprising of students between 11 - 19 years (Grade 8-12 equivalent to KS3, KS4 and KS5) of diverse backgrounds producing excellent results. A motivated professional with strong analytical skills and proven experience in the teaching and learning of mathematics curricula of Zimbabwe (Cambridge syllabi similar to the UK curriculum) and the CAPS curriculum of South Africa. I am also skilled in working with high school and university students. I would be a valid team player who will offer strong contribution by focusing on students` development and supporting other staff members to meet the Instiuition's objectives and raise the students` achievements.

Career History

Jan 2024 – Present : **Mathematics & Mathematical Literacy Educator,** Penryn College, Nelspruit, South Africa

- Plan, prepare, deliver lessons and offer instructional material that cater to the diverse learning needs of learners.
- Use relevant technology confidently in teaching to promote differentiated instruction.
- Observe, evaluate and reflect on student's performance, academic development and refine on teaching practice.
- Manage learner behaviour in the classroom by establishing and enforcing rules and procedures.
- Maintain discipline according to the school' s code of conduct regarding discipline measures.
- Communicate effectively with parents / guardians regarding learners' progress and any concerns.
- Establish and communicate clear learning objectives for all class activities prepared.
- Create a teaching and learning environment that is nurturing, and which promotes active / engaged learning.
- Update all relevant records accurately as required by laws, district policies and school regulations.
- Assign and grade class work, homework, class tests, assignments, final assessments and write report comments.
- Provide appropriate feedback on work and assessments given to students to enhance performance.
- Participate in department, school, district and meetings and provide constructive feedback to all stakeholders.
- Attend Mathematics & Mathematical workshops at Cluster, District, Provisional and National level.

2009 – Dec 2023 : **Mathematics & Maths Literacy Educator,** Mpumalanga Department of Education, South Africa

- Taught Mathematics and Maths Literacy learners from Grade 8 to 12 with multiple cultural backgrounds.
- Developed Mathematics and Maths Literacy lesson planning, quiz, homework, test and examination procedures.
- Produced hybrid (both onsite and online) tutorial activities for learner to easily access after school hours.
- Developed audio and visual (GeoGebra) resources to help learners improve problem solving skills.
- Maintained a positive teaching and learning environment before, during and after Covid Pandemic.
- Supervised and interacted with over 300 learners across grades onsite and during online sessions.
- Collaborated with colleagues in the department to create instructive exercises and lesson planning.
- Provided feedback and instruction to individual learners.
- Engaged with learners, parents, and other team members guided by policy requirements.

- Monitored learners and inspired them to stay focused on assigned tasks.
- Worked with diverse learners to develop interpersonal skills in a conducive learning environment.
- Coached learners Javelin and Mathematics Olympiads competitions.
- Participated in department, school, district and meetings and provided constructive feedback to all stakeholders.
- Attended Mathematics workshops at Cluster, District, Provisional and National level for professional growth.
- Conducted and coordinated Representative Council of Learners` leadership training programs as per School policy.
- Directed and provided feed back on Academic committee issues raising learners` academic performance.

2013 – Present: **Mathematics Tutor (Part-time),** Programme for Technological Careers (PROTEC)

- Teaching Grade 10, 11 and 12 learners from selected deep rural schools. I have maintained pass rates for Grade 12 learners at National Senior Certificate (NSC) level ranging from 95% – 100% with quality Bachelor passes.

2009 – 2010: **Mathematics Tutor (Part-time),** Pen reach community outreach

- Taught and assessed Grades 10, 11 and 12 Mathematics learners from deep rural disadvantaged schools.

National Senior Certificate Examination Marking Experience:

I have been a National Senior Certificate Examinations Official for six years marking Mathematical literacy Paper 1.

2012: **Marker** – My role was marking of learners` National scripts.

2013 – 2018: **Senior Marker** – My role was that of moderating scripts marked by markers and provide feedback.

2016 – 2018: **Facilitator/Tutor (Advanced Certificate in Teaching),** University of Free State, South Africa

- Taught in-service teachers both methodology and Content Modules (Senior Phase) at Post-graduate level and achieved a pass rate of 78%.
- Marked semester tests and final examinations, graded and gave feedback as per University`s academic policy requirements.

1999 – 2008: **Head of Department (Mathematics) (Permanent role),** Ministry of Education & Culture, Zimbabwe

- I chaired Departmental meetings at school level.
- I taught Mathematics up to General Certificate in Education (GCE) Advanced Level Cambridge syllabus.
- I ensured that I attend departmental meetings at district & National level.
- I took responsibility of allocating Mathematics classes to sub-ordinates and supervising their work.

Administrative Duties & Committees

- Academic committee member and Representative Council of Learners (RCL) committee member

Achievement(s) & Leadership

- Teacher For Excellence Award, 2012. Awarded by University of Johannesburg, South Africa.

Professional & Educational Qualifications

2015 - 2020: PhD, University of Pretoria, South Africa. Major: Mathematics Education (passed with minor changes)

2010 – 2011: Advanced Certificate in Education, University of Johannesburg, South Africa
Major: Mathematics Education –FET Phase (Cum laude / Distinction)

2006 – 2010: MSc in Operations Research, National University of Science and Technology, Zimbabwe
Majors: Operations Research Techniques, Industrial Statistics & Applications of Quantitative Analysis

2002 – 2005: BScEd Honours, Bindura University of Science Education, Zimbabwe
Major: Mathematics Education & Theories of Education (passed with degree classification: 2.2)

1997 – 1998: Diploma in Education, University of Zimbabwe, Zimbabwe
Majors: Mathematics Education & Theories of Education

Current Membership of Professional Association(s)

- Association of Mathematics Educators in South Africa (AMESA), 2012 – Present.

Professional Development

2013: Attended a Workshop on the use of GeoGebra in the teaching and learning of Eucledian geometry conducted by Dr Stephen Sproule**,** Penryn College, South Africa.

Community engagement programmes

2013 – Present:

- I voluntarily participate in the local District Matric Mathematics and Maths Literacy Winter & Summer tutoring programs before final National examinations.
- Initiated voluntary tutoring services to deep rural schools in the District on integration of GeoGebra in learning geometry and other topics in Mathematics.

Competencies (Skills, Knowledge and Behavioural attributes)

Languages - English (fluent), Shona (fluent), IsiZulu (fluent) and Siswati (conversational)

Professional attributes

- Expert knowledge of teaching methodologies in the different knowledge fields in Mathematics and Maths Literacy;
- Outstanding knowledge of South African education system regarding Mathematics and Maths Literacy subjects;
- Excellent language and communication skills both verbally and written;
- Professional and confident when applying knowledge and skills in teaching and supervision;
- Able to work as an individual and in a team to develop and align curriculum and instructional strategies;
- Willingness to learn, offer help, self-motivated and positive all the time;
- Exceptional academic and administrative experience.

Computer Skills

- Proficient in Microsoft skills including MS Word, Excel and PowerPoint
- Skilled in Statistical and management package: SPSS
- Proficient in the use of mathematical package: GeoGebra
- Skilled in the use of Management Learning Systems such as Microsoft Teams and Google classroom.
- Expert in using Reference Management Softwares –Mendeley library and EndNote.

Hobbies & Interests

- Conducting research in the field of Mathematics Education
- Watching Television & playing Soccer

Research & Innovation

- Quantitative, Qualitative research skills, Data collection and data analysis experience

Publications

Recent publication(s) in peer-reviewed Journals

Manganyana, C., van Putten, L.S., Rauscher, W. J. (2020). The use of GeoGebra in disadvantaged rural geometry classrooms. Int. J. Emerg. Technol. Learn(*iJET*)., vol. 15, no. 14, pp. 97–108. Available from: https://doi.org/10.3991/ijet.v15i14.13739

Manganyana, C. (2023). How I teach inequalities associated with Functions using GeoGebra. A case of Grade 10. In D. Mhakure & C. Skelton (Eds), Paper presented at the Association for Mathematics Education of South Africa Conference June 26-30 2023, Vol 2, pp. 180-181: University of Cape Town, South Africa.

PhD thesis

Manganyana, C. (2020) The influence of GeoGebra training on teachers and learners in rural geometry classrooms. PhD Thesis. University of Pretoria, South Africa.
https://repository.up.ac.za/bitstream/handle/2263/78470/Manganyana_Influence_2020.pdf

References

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