

Curriculum Vitae

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Mr. Nathaniel William Wilson (b. 1976)

Boarding Housemaster / Pastoral Care Provider

School House Leader / Counselling Officer

Head of Department (Science) / Academic Scholar

Science Teacher & Curricular Specialist

STEM Facilitator & Lead Teacher

Extracurricular Activities Facilitator

Team-building Enthusiast

Master's Degree in Biochemistry (Stellenbosch University, South Africa)

PGCE (University of Nottingham, UK)

Certificate in School Management & Leadership (CSML) (Harvard University, USA)

EDUCATIONAL SUMMARY

- Attended primary and secondary schools in the Western Cape Province of South Africa, matriculated 1994
- 1998 – 2000 Bachelor's Degree in Sciences
- 2001 Honour's Degree in Biochemistry
- 2002 – 2004 Master's Degree in Biochemistry, graduated in December 2005, [thesis available here](#)

POST-TERTIARY CERTIFICATIONS

- 2020 Postgraduate Certificate in Education PGCE, University of Nottingham, United Kingdom
- 2021 Certificate in School Management and Leadership CSML, Harvard University, USA

EDUCATIONAL PHILOSOPHY

My approach to education is simple yet deep, based on the notions of respect, inclusivity, mutual care, and developing a stickable habit of lifelong learning.

Respect:

- We can only have the best of educational outcomes if we maintain mutual respect for each other. A lack of respect is a sign of individual tension and can be used as an identifier for profound changes in both teacher and student, should both be willing to engage positively for the sake of personal growth.
- Respectfulness also entails the idea of sharing relevant knowledge that aids teaching and learning. A classroom is thus a safe place in which such sharing can occur while levels of trust between all stakeholders continually deepen.

Inclusivity:

- Each individual within the educational setting deserves the best chances for improvement, regardless of socio-personal attributes. As such, each student is given multiple chances for both academic and personal growth and is positively encouraged to include peers and other community members in respective learning processes.
- As part of this mindset, the development of tolerance and social acceptance are major educational outcomes, and knowledge of purposeful exclusion of others are used as key factors in planning how to aid a

student or teacher within the school community so that – ultimately – they can also benefit from practicing more inclusivity.

Mutual Care:

- In an effort to combat the pervasiveness of the phrase “I don’t care”, classroom attention is drawn to scenarios in which it is abundantly clear that humans – as social beings – thrive when caring for one another. “Mutual” care involves the teacher caring about how well the student learns while the student cares about how well the teacher teaches; both parties improve with vital, two-way feedback.
- Usually, a lack of care manifests itself in various ways, and the role of the teacher is to observe well when such could be the case with a student, ultimately to share with caregivers throughout the school community tasked with supporting the affected party. On the flip side, should a teacher suffer from a lack of care, then student observations are noted and shared with the intent of helping the teacher positively reaffirm a caring attitude (which is vital to the success of learning that happens in the classroom space). As a general rule for myself, a teacher cannot afford to be guilty of not caring.

Lifelong Learning:

- Learning doesn’t just happen in the classroom or at school and therefore all learners (which includes teachers and leaders and everyone else) must prepare for being ready whenever learning occurs. In order to achieve such a state of perpetual learning preparedness, learners learn about the process of learning, which then aids in an understanding of when and how learning happens, and as such opportunities for learning could increase in frequency, scope, and depth.
- Within the regular classroom environment chances are provided for learners to learn about concepts that support lifelong learning, in addition to the time allowed for applying that knowledge while receiving expert guidance from the teacher.
- Knowledge learned and skills gained in the educational setting can be learned well enough so that each individual learner is able to apply their learning to life situations that happen long after secondary school. After all, every day that we live is a perfect day for learning, a process that never stops.

- secondary education & development in teaching -
**TEACHER TRAINING, WORK EXPERIENCE &
 PEDAGOGICAL PRAXIS DEVELOPMENT**

(2006 – 2022)

Teaching Jobs Table
 (Updated Nov 2022)

<i>Job duration</i>	<i>Employer</i>	<i>Role(s)</i>	<i>Subjects (if applicable)</i>	<i>Notes</i>
1 year 1 Jan 2006 – 31 Dec 2006	Boston Private School, Cape Town, South Africa	Grade 11 Leader Science Teacher	Biology / Life Sciences Chemistry Physics Mathematics	
3 months 1 Jan 2007 – 31 Mar 2007	Kuils River Technical High School, Cape Town, South Africa	Acting Head of Mathematics Grades 11-12 & Mathematics Teacher	Mathematics	The role was not finalised by the local government and allowed me to exercise the option of finding other jobs
1 year 1 Mar 2009 – 28 Feb 2010	Yew Wah International Education School of Shanghai (YWIES), Shanghai, China	Science & Mathematics Teacher Curriculum: Cambridge A-level	A-level Chemistry A-level Pure Mathematics	YWIES is part of the YCYW Foundation (based in Hong Kong) Return to South Africa for family reasons
2 years	Malvern College Qingdao, Qingdao, China	Science Teacher & Boarding Housemaster Curriculum: Edexcel	A-level Chemistry IGCSE Physics, Chemistry and Biology	This job allowed me the chance to develop my pastoral abilities, and to learn more about social- emotional learning

Teaching Jobs Table – continued

(Updated May 2022)

<i>Job duration</i>	<i>Employer</i>	<i>Role(s)</i>	<i>Subjects (if applicable)</i>	<i>Notes</i>
1 semester 15 Aug 2016 – 31 Jan 2017	Wuxi. No.1 High School, Wuxi, China	Science Teacher Curricula: IBDP & Cambridge A-level	IBDP Chemistry A-level Physics	This job involved a daily commute of 280 km to and from a neighbouring province
3 years 17 Feb 2017 – 16 Feb 2020	Shanghai Brisbane Education Training Center (SBETC), Shanghai, China	Science Teacher & STEM Lab Facilitator Curriculum: American CORE Standards	AP Biology AP Physics AP Chemistry & STEM Elective Courses	I attended training for AP Physics C in Hangzhou, China
1 year 1 Aug 2020 – 31 Jul 2021	Western International School of Shanghai (WISS), Shanghai, China	Physics Teacher & Head of Science Curricula: IBDP MYP	IBDP Physics MYP Design	My first appointment as HOD My first job at a fully accredited international school (first job after the start of COVID-19)
1 year 1 Aug 2021 – 31 Jul 2022	Yew Chung International School of Shanghai (YCIS), Shanghai, China	Biology Teacher Curricula: IBDP & IGCSE	IBDP Biology IGCSE Biology	YCIS is the oldest international school in Shanghai, and one of the most prestigious for students YCIS is also part of the YCYW Foundation

Educational Training Table

<i>Date / Duration of Training</i>	<i>Accreditation Provider / Representative Company</i>	<i>Subjects / Specialisations</i>
<p>1 Feb 1998 – 12 Dec 2000 Awarded 12 Dec 2000</p> <p>1 Feb 2001 – 12 Dec 2001 Awarded 12 Dec 2001</p> <p>1 Feb 2002 – 12 Dec 2004 Awarded 12 Dec 2005</p>	<p>Stellenbosch University (www.sun.ac.za)</p>	<p>Bachelor's in Science</p> <p>Honour's Degree in Biochemistry</p> <p>Master's Degree in Biochemistry</p>
<p>120 hours (ONLINE) Awarded 14 Apr 2017</p>	<p>TEFL.org.uk</p>	<p>Teaching English as Foreign Language (TEFL)</p> <p>Teaching English to Speakers of Other Languages (TESOL)</p>
<p>15 Aug 2018 – 12 Sep 2018 (ONLINE) Awarded 12 Sep 2018</p>	<p>International Baccalaureate Organisation (IBO.org)</p>	<p>Biology (Cat. 1) Chemistry (Cat.1)</p>
<p>20 Aug 2018 – 24 Aug 2018 (ONLINE) Awarded 24 Aug 2018</p>	<p>Advanced Placement (AP) CollegeBoard</p>	<p>Physics C: Electricity and Magnetism & Physics C: Mechanics</p>
<p>Aug 2018 – Aug 2019 Awarded March 2020</p>	<p>University of Nottingham (School of Education)</p>	<p>Postgraduate Certificate in Education The PGCEi is a Level 7 qualification on the UK National Qualifications Framework and carries 60 CATS points</p>
<p>12 Aug 2020 – 09 Sep 2020 (ONLINE) Awarded 09 Sep 2020</p>	<p>International Baccalaureate Organisation (IBO.org)</p>	<p>Physics (Cat. 2)</p>
<p>Summer of 2020 Summer of 2021 Awarded 18 Aug 2021</p>	<p>Harvard Graduate School of Education & Harvard Business School (HBS ONLINE)</p>	<p>Certificate in School Management and Leadership (CSML) (Alternative CSML page)</p>

SOCIODEMOGRAPHIC DETAILS

European Home / ITALY



Family Unit / Wife (named Tea) & Our Pet (Boo)



RESEARCH & REVIEW PUBLICATIONS

(Total number of Google Scholar citations: 707)

Last checked on 3 Nov 2022

1. Wilson NW. (2012). Chaos in Western Medicine: how issues of social-professional status are undermining our health. *Global Journal of Health Science* 4(6): 1-16. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4777009/>
(Number of Citations: 13)
2. Wilson NW, Couper I, De Vries E, et al. (2009). A critical review of interventions to redress the inequitable distribution of healthcare professionals to rural and remote areas. *Rural And Remote Health* 9: 1060. Available at <https://search.informit.org/doi/pdf/10.3316/informit.496326474031125>
(Number of Citations: 641)
3. Wilson NW, Bouhuijs PAJ, Conradie HH, et al. (2008). Educational value and enjoyment of a rural clinical rotation for medical students. *Rural and Remote Health* 8: 999. Available at <https://search.informit.org/doi/pdf/10.3316/informit.468619245770182>
(Number of Citations: 26)
4. Smith C, Wilson NW, Louw A, et al. (2007). Illuminating the interrelated immune and endocrine adaptations after multiple exposures to short immobilization stress by in vivo blocking of IL-6. *American Journal of Physiology - Regulatory, Integrative and Comparative Physiology* 292(4): R1439-R1447. Available at <https://doi.org/10.1152/ajpregu.00602.2006>
(Number of Citations: 27)
5. Wilson NW. (2005). Effects of neutralising interleukin-6 on glucocorticoid-mediated adaptations to stress in rat skeletal muscle and liver. MSc Thesis, Stellenbosch University. Available at <http://scholar.sun.ac.za/handle/10019.1/50333>

2021-2022 PROFESSIONAL DEVELOPMENT (PD) ACTIVITIES

DATA SCIENCE DEVELOPMENT

as a member of **RESEARCH DATA ALLIANCE (RDA)**

International Data Week 20-24 JUNE 2022 (www.idw2022.org)

With the overarching theme of ‘**Data to Improve Our World**’, IDW 2022 is based on the following subthemes throughout the event as hosted by the Korean Institute of Science and Technology Information (KISTI) in South Korea, both virtual and in-person:

- Research Transparency and Reproducibility
- Data, Research and Industry: The interface between data-intensive research and innovation
- Empowering and enabling society: Data (Science) Education and Data Literacy
- Transdisciplinary Research and Citizen Science

Full details about the main theme for this edition, and the various subthemes, can be found [here](#).

Full details about the IDW 2022 programme can be found [here](#).

The RDA Plenary 19 Programme, with a full overview of group sessions, can be found [here](#).

EDUCATIONAL DEVELOPMENT

as a **Secondary Educator (K-12)**

IBDP Biology IA (Internal Assessment) Webinar, 9 JUNE 2022

Webinar invitation message:

Join us as host Alex Catalo draws on her experience and expertise as an IBDP Biology teacher, consultant and curriculum designer to present on how to incorporate Kognity into your Internal Assessment prep. This webinar will review:

- Strategies for encouraging authentic IA skill development
- Examining how to turn the IA assessment criteria into practical application in the classroom.
- Examples of IAs that show the best practice and challenges of connecting criteria to action.

URL: https://kognity.zoom.us/webinar/register/WN_yuxTHwPASyiQTUsu_qg0HA

LEADERSHIP DEVELOPMENT

as an **EDUCATIONAL LEADER**

Completion of the Certificate in School Management and Leadership, awarded 18 AUGUST 2021

Course description:

The Certificate in School Management and Leadership (CSML), a multi-course certificate program for PreK-12 school leaders, is an innovative collaboration between the Harvard Graduate School of Education (HGSE) and Harvard Business School (HBS). Bridging the fields of business and education, CSML integrates expertise in managing teams and organizations with best practices in school and instructional leadership, to provide school leaders with frameworks, skills, and knowledge to effectively lead and drive change improvement in schools.

URL: <https://pll.harvard.edu/course/certificate-school-management-and-leadership-csml?delta=0>

- higher education & scientific research -

TRAINING, WORK EXPERIENCE & ACCOLADES

(1998 – 2012)

A.

Undergraduate student (BSc in Molecular Biology and Biotechnology)

(1 February 1998 – 12 December 2000)

Faculty of Science, Stellenbosch University (SU)

URL: <http://www.sun.ac.za/english/maties/what-can-i-study/undergraduates>

Majors: Biochemistry and Microbiology

Contactable reference for this position:

SU Faculty of Science

Mr. Bevin Abels – E-mail: bpa@sun.ac.za Tel: +27 (0)21 808 4832

(My SU student number for enquiries: 12455644)

B.

Honours' student (Hons BSc in Biochemistry) & postgraduate tutor of undergraduates

(15 January 2001 – 12 December 2001)

Faculty of Sciences, Department of Biochemistry, Stellenbosch University

Subject specialisation: Biochemistry

URL: <https://www.sun.ac.za/english/faculty/science/departments-centres/departments>

Responsibilities and procedures:

- (i) supervising academic tutorial sessions with second-year (i.e., sophomore) undergraduate biochemistry students (studying Bachelor's Degree in Science degree courses), and
- (ii) assisting with laboratory assignments and supervising completion of lab-work routines.

Contactable reference for this position:

Department of Biochemistry

Prof. A. Louw – E-mail: al@sun.ac.za Tel: +27 (0)21 808 5873

(My SU student number for enquiries: 12455644)

C.

Master's student (MSc in Biochemistry) & postgraduate laboratory assistant

(1 February 2002 – 12 December 2004)

Faculty of Science, Department of Biochemistry & Department of Physiological Sciences,
Stellenbosch University.

Subject specialisation: Biochemistry, in an interdisciplinary research environment
focused on Endocrinology and Stress Physiology

URL: <https://www.sun.ac.za/english/faculty/science/departments-centres/departments>

Responsibilities and procedures:

- (i) conducting preliminary secondary research and writing draft grant proposals,
- (ii) assisting PhD researcher in setting up project for both PhD and MSc projects,
- (iii) assisting athletes with physiological testing and study participation, e.g., hyperbaric chamber and VO₂ max measurements during incremental exercise testing,
- (iv) animal breeding,
- (v) animal experimentation, involving both control and experimental groups,
- (vi) biochemical assay preparation and implementation in tissue from rats subjected to intermittent psychological stress, focusing on the activities of glucocorticoid steroids and tyrosine aminotransferase,
- (vii) controlling conditions that were ideal for measuring research variables,
- (viii) post-experimental analysis,
- (ix) thesis draft and finalisation,
- (x) conclusion of MSc study outcomes and reporting to faculty leadership during dissertation defence,
- (xi) contributions to international research publication (2007) in the American Journal of Physiology, and
- (xii) experiential contributions as to how the arrangement for interdepartmental postgraduate collaboration would be implemented in future.

Note: the MSc study was a pioneering interdisciplinary project between two departments in the Faculty of Science, therefore two supervisors were involved, each serving as a contactable reference:

Department of Physiological Sciences

Prof. K.H. Myburgh – E-mail: khm@sun.ac.za Tel: +27 (0)21 808 3149

Department of Biochemistry

Prof. A. Louw – E-mail: al@sun.ac.za Tel: +27 (0)21 808 5873

(My SU student number for enquiries: 12455644)

D.

Neuroscience Research Assistant

(1 January 2005 – 31 December 2005)

Neuroscience Research Group, Department of Medical Physiology, Faculty of Medicine and Health Sciences
(FMHS),

Tygerberg Medical Campus, Stellenbosch University

URL: <http://www.sun.ac.za/english/faculty/healthsciences>

Responsibilities and procedures:

- (i) animal breeding,
- (ii) animal experimentation, focusing on the effects of 6-hydroxydopamine (6-OHDA) delivered through a procedure known as stereotaxis, in an effort to further elucidate mechanisms of neurodegenerative diseases such as Parkinson's or Alzheimer's,
- (iii) immunohistochemistry assay preparation and implementation in tissue from lesioned rat brains,
- (iv) controlling conditions that were ideal for measuring research variables,
- (v) assisting in preparation of laboratory procedures for PhD candidates,
- (vi) writing drafts for doctoral research involving Parkinson's and Alzheimer's diseases,
- (vii) introduction to clinical patient interactions,
- (viii) liaising with other postgraduate students in the faculty regarding collaborative research projects,
- (ix) attending journal meetings, and
- (x) arranging/attending cross-campus academic conferences between campuses of Stellenbosch University, and between campuses of Stellenbosch University and the University of Cape Town (UCT).

The contactable reference for this position accepted a job at another university:

Head of School: Physiology

University of the Witwatersrand (WITS)

Prof. William Daniels – E-mail: William.Daniels@wits.ac.za Tel: +27 (0)11 717 2704

OR

An alternative contactable reference at the Stellenbosch FMHS can be contacted:

Head of Division: Medical Physiology

Prof. Hans Strijdom – E-mail: jgstr@sun.ac.za Tel: +27 (0)21 938 9387

E.

Medical Research Officer

(1 April 2007 – 31 October 2008)

Ukwanda Center for Rural Health (“Ukwanda”), Faculty of Medicine and Health Sciences (FMHS),
Tygerberg Medical Campus, Stellenbosch University

URL: <https://blogs.sun.ac.za/ukwanda/>

Responsibilities and procedures:

- (i) writing grant applications and securing funding for Ukwanda’s projects,
- (ii) maintenance and expansion of medical school rural training platform across the province, by establishing and maintaining links between FMHS and stakeholders in respective rural communities,
- (iii) serving on the MBChB Committee, representing Ukwanda developmental research capacity, and liaising with teachers and leaders within the faculty, with the aim of holistically improving rural medical training,
- (iv) promoting collaborative and interdisciplinary enterprise among members from diverse healthcare specialities,
- (v) conducting research among undergraduate medical students and qualified medical professionals, for purposes of improving rural medical training within the preamble and objectives of the FMHS,
- (vi) dissemination of research findings, e.g., 2008 and 2009 publications listed under Research & Review Publications at the beginning of this document,
- (vii) writing the draft for the first Rural Clinical School (RCS) in Africa, i.e., the Ukwanda Rural Clinical School (<https://blogs.sun.ac.za/ukwanda/ukwanda-rural-clinical-school/>),
- (viii) arranging the 2008 RuDASA Conference in Beaufort West, South Africa, as a member of the RuDASA Organising Committee, in collaboration with [StellMed](#) and the leadership of RuDASA ([Rural Doctors Association of Southern Africa](#)), and taking responsibility for hosting a conference speaker invited from India, Dr. Immanuel Rajamani, a primary care physician, as mentioned in a [Taylor & Francis](#) publication, and
- (ix) assisting the provincial government ([Western Cape Government](#)) with burden of disease determinations and other epidemiological indicators, as part the primary care mandate for rural and underserved communities.

ACCOLADES

A notable acknowledgement was made when the editor of RRH wrote to inform that the 2009 review publication has garnered the highest number of citations for an article published by RRH since its inception. Currently the number of citations exceeds 600. I was interviewed by the editor of RRH, together with Prof. Ian Couper (also a co-author), to discuss this achievement. The review itself was also cited on multiple occasions by published works featured in the *Bulletin of the World Health Organisation* (WHO Bulletin).

The contactable reference for this position accepted a job in another country:

Co-Director, Sydney Institute for Infectious Diseases (Sydney ID)

Sydney University (Australia)

Prof. Ben Marais – E-mail: ben.marais@sydney.edu.au Tel: +61 2 9845 3433

OR

An alternative contactable reference at Ukwanda can be contacted:

Director: Ukwanda Center for Rural Health

[RRH Profile](#)

Prof. Ian Couper – E-mail: icouper@sun.ac.za Tel: +27 (0)21 938 9873

