Postgraduate Handbook

A Comprehensive Guide for PhD and Master's Students and their Supervisors

https://doi.org/10.21775/9781910190753

Aceme Nyika

Graduate Support, Research and Innovation Department University of Pretoria Pretoria South Africa

Copyright © 2018

Caister Academic Press Norfolk, UK

www.caister.com

British Library Cataloguing-in-Publication Data A catalogue record for this book is available from the British Library

ISBN: 978-1-910190-75-3 (paperback) ISBN: 978-1-910190-76-0 (ebook)

Description or mention of instrumentation, software, or other products in this book does not imply endorsement by the author or publisher. The author and publisher do not assume responsibility for the validity of any products or procedures mentioned or described in this book or for the consequences of their use.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher. No claim to original U.S. Government works.

Cover design adapted from Figure 5.2.

Ebooks

Ebooks supplied to individuals are single-user only and must not be reproduced, copied, stored in a retrieval system, or distributed by any means, electronic, mechanical, photocopying, email, internet or otherwise.

Ebooks supplied to academic libraries, corporations, government organizations, public libraries, and school libraries are subject to the terms and conditions specified by the supplier.

Contents

	Preface	٧
1	Factors to Consider When Deciding to Obtain a Postgraduate Qualification	1
2	Philosophical Background of Knowledge and Some Adult Learning Theories: Simplification of the Terminology	9
3	Postgraduate Programmes: Variety, Depth, Credits and Enrolment	19
4	What is Research? Research Questions, Research Designs and Types of Variables	27
5	Reliability and Validity of Quantitative Research Instruments	39
6	Writing a Research Proposal: From Title Through Research Question and Conceptual Framework to Methodology	49
7	Postgraduate Thesis, Dissertation or Research Report: Different Formats and Flow From Title to Conclusion	69
8	Research Integrity: The Obvious and the Less Obvious Dimensions	79
9	Professional Doctorate Degrees: How Do They Differ From Conventional PhD Degrees?	93
10	'Guys! Let Me Tell You About My PhD Supervisor': Postgraduate Supervision Practicalities and Approaches	97
	Index	100

Current Books of Interest

DNA Tumour Viruses: Virology, Pathogenesis and Vaccines	2018
Pathogenic Escherichia coli: Evolution, Omics, Detection and Control	2018
Enteroviruses: Omics, Molecular Biology, and Control	2018
Molecular Biology of Kinetoplastid Parasites	2018
Bacterial Evasion of the Host Immune System	2017
Illustrated Dictionary of Parasitology in the Post-genomic Era	2017
Next-generation Sequencing and Bioinformatics for Plant Science	2017
The CRISPR/Cas System: Emerging Technology and Application	2017
Brewing Microbiology: Current Research, Omics and Microbial Ecology	2017
Metagenomics: Current Advances and Emerging Concepts	2017
Bacillus: Cellular and Molecular Biology (Third Edition)	2017
Cyanobacteria: Omics and Manipulation	2017
Foot-and-Mouth Disease Virus: Current Research and Emerging Trends	2017
Brain-eating Amoebae: Biology and Pathogenesis of Naegleria fowleri	2016
Staphylococcus: Genetics and Physiology	2016
Chloroplasts: Current Research and Future Trends	2016
Microbial Biodegradation: From Omics to Function and Application	2016
Influenza: Current Research	2016
MALDI-TOF Mass Spectrometry in Microbiology	2016
Aspergillus and Penicillium in the Post-genomic Era	2016
The Bacteriocins: Current Knowledge and Future Prospects	2016
Omics in Plant Disease Resistance	2016
Acidophiles: Life in Extremely Acidic Environments	2016
Climate Change and Microbial Ecology: Current Research and Future Trends	2016
Biofilms in Bioremediation: Current Research and Emerging Technologies	2016
Microalgae: Current Research and Applications	2016
Gas Plasma Sterilization in Microbiology: Theory, Applications, Pitfalls and	
New Perspectives	2016
Virus Evolution: Current Research and Future Directions	2016
Arboviruses: Molecular Biology, Evolution and Control	2016
Shigella: Molecular and Cellular Biology	2016
Aquatic Biofilms: Ecology, Water Quality and Wastewater Treatment	2016
Alphaviruses: Current Biology	
Thermophilic Microorganisms	2015
Flow Cytometry in Microbiology: Technology and Applications	2015

Preface

This postgraduate handbook is intended for postgraduate students and their supervisors. As postgraduate studies are more dependent on self-directed active learning than on teacher-driven passive learning approaches, it is critical for one to know clearly why one wants to embark on postgraduate studies. This is because in general, postgraduate programmes are aimed at moulding postgraduate students into resourceful people who can think critically and can work independently. Having a clear motivation for undertaking postgraduate studies tends to have a bearing on the level of dedication and personality attributes of individual postgraduate students. The first chapter therefore focuses on reasons why one may want to pursue postgraduate qualifications.

In order to make an informed decision in terms of choice of postgraduate qualification to pursue, it is necessary to know the different types of postgraduate studies that are offered by various institutions of higher learning. Clarity of what postgraduate studies are is important because sometimes there is confusion which leads to wrongful exclusion or inclusion of some students as postgraduate students. For instance, at some universities some programmes meant for postgraduate students may leave out students studying for postgraduate diplomas yet they are actually postgraduate students. Therefore, the book gives a comprehensive overview of types of postgraduate programmes.

One challenge that is experienced by many postgraduate students is ability to successfully complete postgraduate studies within the stipulated periods for specific programmes. Some postgraduate students drop out, others fail and others take a prolonged period of time to complete their studies. There are various factors that could be attributed to failure to complete or long completion periods, and in most cases it is due to a combination of a number of factors. One of the major factors is lack or inadequacy of research skills, data analysis skills and writing skills not only on the part of postgraduate students, but on the part of supervisors as well in some cases. The book covers topics related to research methodologies, writing skills and student–supervisor relationships.