



UNIVERSITY OF EMBU

PROCEEDINGS OF THE 6TH POSTGRADUATE STUDENTS WORKSHOP ON PUBLISHING

Organized by: Board of Postgraduate Studies
University of Embu

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EXECUTIVE SUMMARY

A one-day postgraduate students' workshop on publishing was held on 27th May 2021. It brought together 139 participants comprising 110 postgraduate students, 17 academic staff members and 12 non-academic staff members of the University of Embu (UoEm). The workshop aimed to sensitize the postgraduate students on manuscript preparation, navigating the peer review process, common challenges that face postgraduate students in research and publication, the importance of data analysis in a manuscript and intellectual property especially patenting. The Vice-Chancellor of the University of Embu, Prof. Daniel Mugendi Njiru, in his opening remarks, emphasized on the need for quality publications indexed by reputable indexing bodies such as Scimago. He acknowledged the students who had published in high impact journals and thus contributed to the webometric ranking of the University. The Deputy Vice-Chancellor (ARE), Prof. Kiplagat Kotut, emphasized the importance of students applying the knowledge from the workshop in preparing their manuscripts. Dr Hellen Njura who graduated from UoEm in 2020, walked the participants through her struggles, endurance, resilience and triumph in her journey of publishing. The importance of having SMART objectives and data analysis dominated discussions during the plenary sessions. The workshop was facilitated by; Prof. Romano Mwirichia the Director of Research and Extension, Prof. Nancy Budambula the Director of Board of Postgraduate Studies, Dr. Daniel Nthiwa and Dr. Julius Mugweru lecturers in the Department of Biological Sciences, Mr. James Njue the University Librarian and Dr. Hellen Njura, a PhD graduate from UoEm.

OPENING PRAYER

The opening prayer was offered by Mr. Julius Letirio an M.Sc. Plant Ecology student.

WELCOME REMARKS AND INTRODUCTION OF PARTICIPANTS BY DIRECTOR BPS, PROF. NANCY BUDAMBULA

The Director Board of Postgraduate Studies (BPS), Prof Nancy Budambula welcomed the participants to the 6th publishing workshop. She recognized the presence of the Vice-Chancellor (VC), Prof. Daniel Mugendi, and the DVC (Academics, Research and Extension), Prof. Kiplagat Kotut. She introduced all the postgraduate students present by School, academic staff present, Directorate of BPS staff and the facilitators; Prof. Romano Mwirichia, Dr. Daniel Nthiwa, Dr. Julius Mugweru, Mr. James Njue and Dr. Hellen Njura. The Director appreciated the management for their support to postgraduate studies, granting permission for the planning and organizing of the workshop as well as supporting the workshop. The Director urged all the participants to adhere to Covid-19 control protocols such as wearing masks correctly, washing hands, frequent sanitizing and keeping social distance.

REMARKS BY DEPUTY VICE-CHANCELLOR (ACADEMICS, RESEARCH AND EXTENSION)

The Deputy Vice-Chancellor (ARE), Prof. Kiplagat Kotut, in his welcoming remarks, acknowledged the presence of the Vice-Chancellor, the academic staff and the postgraduate students. The DVC urged the students to attend all trainings and workshops organized by the University and observed that the University is fully committed to facilitating trainings. He pointed out that UoEm students were privileged to attend such seminars and workshops which are supported by the University management. In addition, he highlighted some tips on how to publish, which include; the reason for publication, the knowledge gap, the right methods and interpretations, when to publish, where to publish, and lastly, the write-up that would be discussed at the workshop. The DVC then invited the Vice-Chancellor to make his speech and officially open the workshop.



The Deputy Vice-Chancellor (ARE), Prof. Kiplagat Kotut addressing participants at the 6th publishing workshop

VICE-CHANCELLOR'S SPEECH DURING THE 6TH POSTGRADUATE STUDENTS PUBLISHING WORKSHOP

The workshop was officially opened by the Vice-Chancellor of the University of Embu, Prof. Daniel Mugendi. The VC assured the students that the University is dedicated to ensuring that postgraduate students are engaged in quality research that could be published in high-impact journals indexed by reputable bodies such as Scimago. He further noted that the major aim of the workshop was to impact students with knowledge and skills on; publishing, patenting and plagiarism prevention. The VC emphasized that the students were required to attend the all postgraduate trainings organized by the University without fail. He also urged students to avoid plagiarism at all costs and to use the University Library that offers the Turnitin tool for for checking plagiarism. He reminded the participants that the University allows up to 15% similarity on works done by students. The VC echoed the need for maximum utilization of electronic resources provided by the University. The VC reminded the participants that the number of publications required by the University was at least one full-length paper and at least two full-length papers for masters and PhD students respectively. He emphasized the need for students to be diligent in their research with a view of producing quality publications. The full speech by the Vice-Chancellor is provided in Appendix 1.



The Vice-Chancellor of the University of Embu, Prof. Daniel Mugendi addressing participants during the 6th postgraduate students publishing workshop at the University of Embu.



Arrival and registration of participants at the 6th postgraduate students publishing workshop



Participants follow proceedings of the 6th postgraduate students publishing workshop

PRESENTATIONS

ONLINE MANUSCRIPT PREPARATION

BY PROF. ROMANO MWIRICHIA, DIRECTOR OF RESEARCH AND EXTENSION

The Director of Research and Extension, Prof Romano Mwirichia informed the participants about the existence and use of online manuscript preparation tools. He stated various online tools are available and can assist the students to write their papers. He highlighted the following:

Wiley Author path

Wiley is a publishing house with online courses to help equip authors with knowledge and skills on writing their manuscripts. They provide author services that guide the students through manuscript writing and submitting to the best journal. One has to create an account on the author-path website <https://www.author-path.com/en>.

Elsevier

It is a publishing house providing the basics on how to write a manuscript. They provide a lead on how to organize the manuscript, how to prepare the research and how to prepare the manuscript. Create an account <https://www.researcheracademy.elsevier.com>

Author aid

This is an online service that involves persons who know how to offer guidance and assistance on manuscript writing. They have 239 articles on how to write a manuscript. They take one through the basics beginning from the title; suggestions on a good title. They also suggest the best journal for your paper, how to construct good sentences, and the requirements of the paper as per the journal suggested. The tool also proposes people who could be mentors. Registration can be done by visiting the website.

Springer Academy

Springer a leading publishing house offers services without pay with the same training on how to write a manuscript. Create an account <https://www.springer.com/gp/authors-editors/journalauthor/> and join the Journal-author-academy.

Types of studies/ articles

Director of Research and Extension further stated the various types of a research studies. They include; research article, a full-length research project, short communication involving a brief report about the study, technical note, a brief report on the methodology, review article, case report and a letter. The University expects the students to present a full-length research article. The results section is an important part of the paper; however, the format and structure of the paper are based on the format of the journal of choice. The detailed presentation is attached as Appendix 2.



The Director of Research and Extension, Prof Romano Mwirichia presenting on manuscript writing



Director of Board of Postgraduate Studies, Prof. Nancy Budambula addressing the students

EMERGING ISSUES IN STUDENT RESEARCH AND PUBLICATIONS BY DIRECTOR OF BOARD OF POSTGRADUATE STUDIES

The Director of Board of Postgraduate Studies, Prof. Nancy Budambula reminded the participants that the publication requirements at the University of Embuare; master's students shall publish one paper from a recognized journal indexed in Scimago and PhD students shall publish two papers. She urged the students to first focus on writing the papers then the thesis. This way the student can prepare and submit the thesis for examination as the publication process in a peer-reviewed journal is in progress. She reminded the students to ensure that they are the first author for their publication. In her presentation, the Director emphasized the need for an appropriate student-supervisors relationship. The students at the University of Embu participate in choosing their supervisors and the University does not select supervisors for the students. The supervisors are appointed through the Senate. She noted that the relationship between the supervisor and the student should always be professional and the University will not tolerate cases of sexual harassment. The Director reminded the participants that the similarity level for student works at the University of Embu is 15%.

The Director, BPS outlined the common challenges that face postgraduate students and result in poor quality theses and publications over the past few years at the University of Embu. In her statement, the major observation was poor-quality objectives. She urged the students to set their research objectives at higher levels of Bloom's taxonomy. This is vital in generating publishable data. She further emphasized that good objectives are applicable for students in both natural sciences and students in social sciences. The Director emphasized that the quality of a paper depends on the objectives. She also discouraged the students from the same department from publishing in the same journal as this may lead to rejection. The University is determined to see students publish papers in high-impact journals. To achieve this, she noted that the University BPS has focused on training postgraduate students.

The Director, Board of Postgraduate Studies noted laziness among students is a common impediment to producing good publications. She discouraged the students from uploading their thesis or results chapter as a way of generating a paper. Instead they should focus on preparing good manuscripts as required by each journal. Students should also include a detailed workplan and budget in their research proposal, as it is the same proposal that would be considered in case of application for funding. In her presentation, the Director noted that the sampling technique was another shortcoming in many student proposals. She urged the participants to be careful with sampling techniques since sample size is core in research. She noted that data analysis and study design are important in research though most students take them for granted. She stated that students should be well conversant with sampling techniques that are available in the previous publishing workshop proceedings that can be downloaded from the BPS website. The Director noted that some of proposals are investigating problems that may not be of importance to society, thus will be problematic to publish. Poor study designs and poor data analysis techniques have also been observed to be common among the theses and manuscripts in the recent while. The Director encouraged the students to follow the instructions given by the specific journal on how to prepare the manuscript as this will reduce chances of rejection of the paper. Before submitting a manuscript to a journal, the participants were urged to ensure that the indexing in Scimago is current. For more details see Appendix 3

DATA ANALYSIS

BY DR. DANIEL NTHIWA, LECTURER IN THE DEPARTMENT OF BIOLOGICAL SCIENCES

Dr. Daniel Nthiwa, a lecturer in Biological Sciences Department at University of Embu, took the participants through the importance of data analysis in a publication. He gave examples of diverse software like r-GUI, R-studio, SPSS, STATA and NVIVO that can be used in different types of studies. He encouraged the students to focus on open access software like R studio because it is flexible and can be used by both sciences and social sciences. Dr. Nthiwa noted that there are free online courses on how to use this software. He then emphasized the factors influencing the choice of data analysis software. Such factors include; the type of data, study design, and distribution of data. He encouraged the participants to keep their data because most high-impact journals require the students to produce their raw data. In his presentation, he pointed out the questionnaire as an important tool in data collection used by students from different departments. He further noted the steps of the survey process, which include; the purpose, planning, designing questions, testing and evaluation, data collection, and analysis and report writing. Dr. Nthiwa encouraged the students to formulate easy-to-understand questions based on the requirements of the questionnaire preparation. He urged the students to carry out pre-testing or piloting to help improve the clarity of the questionnaire and improve the questions and time taken. He further advised the students to involve subject experts, methodologists and data analysts when designing a questionnaire. The detailed presentation on data analysis is provided as Appendix 4.

WHAT EDITORS AND REVIEWERS LOOK FOR: TEN LESSONS FROM MY JOURNEY, BY PROF NANCY BUDAMBULA, DIRECTOR OF BOARD OF POSTGRADUATE STUDIES

Prof. Nancy Budambula shared the key issues that reviewers and editors look for in a manuscript. In preparing a manuscript one must pay close attention to instructions to author which are often specific to a particular journal. When asked to do corrections, these must be done, and every correction responded to. Those that cannot be done have to be explained. During the research phase it is important to pay attention to details as sometimes the small observations turn out to be the major findings. Good papers will not come easily as they will require investment of time and demonstration of scientific or academic rigour thus one must pay attention to controls, ethical approvals, replication, sample size, appropriate design and data analysis. Whereas a thesis will report everything that was done, a paper will focus on important findings, thus the two can have different findings and a thesis can yield many papers. A good manuscript title that summarises the findings is an important selling point for a manuscript. A manuscript must also be of significance or importance to human welfare and society.

Rejection of manuscripts is part and parcel of the publishing process. Therefore, one must prepare and deal with rejection of manuscripts when it happens. Rejection is not limited to students as it happens to everyone. Prof Budambula shared her experiences of rejection and encouraged the participants not to give up when it happens. Instead of giving up authors should view it as an opportunity for improvement. When a manuscript is rejected, use the comments to

improve the manuscript then submit to a different journal. Some of the reasons why manuscripts are rejected are:

- Inadequate Sample Size.
- Being outside the aim and scope of the journal.
- Poor study design, poor research questions or poor objectives.
- Poorly written papers, jargon, grammar.
- Nonadherence to instructions to author.
- Inadequate or wrong methodology, data cannot be validated.
- Poor data analyses.
- Does not contribute new knowledge or does not interpret existing knowledge in a new way.
- Lack of originality of thought or significance.
- No clear conclusions were drawn
- Violation of research ethics; plagiarism, ERC, etc

Sometimes a manuscript that challenges status quo or upsets industry can also be rejected.

Is publishing in high impact journals achievable? Prof Budambula explored this question and noted the quality of a paper is decided the day the objectives are set. She noted that objectives set at low levels of Bloom's taxonomy will not yield papers publishable in high impact factor journals. During objective setting, one must consider the kind of journal that can accept the work and read sample articles from the journal of interest. In the era of multidisciplinary research, the questionnaire is a value tool that improves the quality and applicability of research findings. Prof Budambula reiterated that there is no end to learning and she also learns new skills from her students. she noted that a PhD thesis should have 100 to 200 pages while a master's student thesis should have 50 to 100 pages. However, a manuscript ranges 20 to 25 pages though some journals provide a specific number of words. In conclusion, there is no shortcut to publishing, one must be willing to put in the hard work required, follow instructions to author and do corrections from reviewers. For more details see Appendix 5.

A STUDENT EXPERIENCE IN PUBLISHING BY DR. HELLEN NJURA

Dr. Hellen Njura, who graduated with a PhD degree in Education from the University of Embu in 2020, sensitized the participants on the various challenges that students face during the process of publication. She provided a short history of the challenges she faced at the start of her doctoral degree. Dr. Njura mentioned regardless of the challenges she faced, resilience and persistence kept her moving forward. This was achieved through proper planning and time management. She emphasized to the students that we don't just publish to graduate but to generate new ideas and knowledge as well as to research and solve problems that the targeted group faces in society. She also touched on the financial constraints faced by the students in the process of data collection and publishing. To overcome these challenges, she advised the students to be keen on their budget and plan well to ensure that data is collected efficiently and effectively. She emphasized that there is no need to publish in predatory journals, which require publication fees but rather consider publishing in journals that do not require publication cost or provide full waivers to the researchers from the less developed and developing countries. Dr.

Njura also warned the students on the risk of taking so many years to write a manuscript or thesis. First, she noted that the research findings could become outdated with time and you find that other researchers have already gone deep into your research area and even published; thus, your output becomes obsolete and difficult to publish. This results in wastage of resources, which is a key factor because of redoing the work and rewriting the same.

Dr. Njura encouraged the students to go beyond simple software like excel and Statistical Package for Social Sciences (SPSS) for data analysis and recommended more advanced software for data analysis such as STATA and R-studio. In conclusion, Dr. Njura pointed out some observations she had made during her publishing journey. First, she mentioned various mistakes made by students, which include but are not limited to publishing knowingly or unknowingly in predatory journals. Second, frustrations are real during the process of publishing, she mentioned that trying out research funding in vain and losing loved ones at the prime time of studies. Dr. Njura also advised the students not to lie at the boundary. They should have more than the minimum number of articles required by the Board of Postgraduate Studies (Appendix 6).

INTELLECTUAL PROPERTY AND PLAGIARISM BY MR. JAMES NJUE, THE UNIVERSITY LIBRARIAN

The University Librarian briefed the participants on the different forms of Intellectual Property. The Librarian noted that plagiarism has been a key issue in the past and at present. He urged the participants to embrace the goals of intellectual property protection. Intellectual property are creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. Further, he stated that intellectual property is divided into two broad categories, which include;

1. **Industrial property**-which includes inventions (patents), trademarks, industrial designs, and geographic indications of source.
2. **Copyright** includes literary and artistic works such as novels, poems, plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs.

Mr. James Njue also pointed out some basic facts on intellectual property that the authors need to know, and this include: Copyright protection is automatic once a work is fixed in a tangible medium, oint authors each have full and equal copyrights. Copyright can be transferred only in writing. Not all rights have to be given away – author/copyright rights can be broken apart. He also went further and stated that copyright is a "bundle" of author's right, and these exclusive rights include: Reproduce the work in copies, Distribute copies of the work, Publicly display or perform, Make derivatives, adaptations, translations and authorize others to use any of these rights Mr. James Njue mentioned the author's options as one of the intellectual property rights. This authors options include;

1. **Transfer all rights to the publisher** (traditional) - the author no longer has control over work.
2. **Licensing (Creative Commons)**- enables the copyright holder, whether author or publisher, to license partial rights to other parties.

3. **Addenda (SPARC, Science Commons, and CIC)** added to copyright transfer agreements and referred to the author's desired rights. This leads to negotiations between author and publisher.

The University Librarian also elaborated on dangers of plagiarism. He stated that plagiarism is using others' ideas and words without giving them credit/the act of presenting other persons' work or ideas as your own. He expounded on the types of plagiarism as shown below;

1. **Stealing** - This is exactly what it sounds like! If you take a sentence, or even a unique turn of phrase, and pass it off as your own, this is stealing.
2. **Patch working** - Using words and phrases from a source text (that may or may not be acknowledged) and patching them together into new sentences.
3. **Insufficient Paraphrasing** - Taking an author's words and changing them slightly without quoting the actual text is plagiarism. Say it entirely in your own words, otherwise, but the author's text in quotes and reference the source.
4. **Misquoting** - When you quote another author in your work, always be sure to quote exactly what was said. Direct quotes are when you use an author's exact words. Indirect quotes are when you report an author's spoken or written words, but not his/her exact words. Both must be cited!!
5. **Duplicating Publications** - You cannot reuse/recycle your paper for use in another assignment without explicit permission from the instructor. If you cite your previous works, remember to cite yourself!

He stated that the common mistakes that most of the researchers make contributing to plagiarism include but not limited to: Cut & paste from electronic/Internet sources without using quotes or properly citing the source; Download audio, visual, or arts without proper permission (Copyright issues); Cite statistics/facts without the source, unless they are common knowledge; The University Librarian outlined the basic guidelines to avoid plagiarism. These include;

1. Write down your thoughts and questions before looking into sources. Use these notes to keep track of changes in your ideas
2. Don't rely too much on one source, or you might use that person's thoughts instead of your own
3. Cite the sources of all ideas, opinions, facts, and statistics that aren't common knowledge.
4. You do not need to cite if you are using universally understood concepts or common knowledge
5. When in doubt, CITE

Mr. James Njue recommended Turnitin as the most suitable anti-plagiarism software. He stated that the purpose of Turnitin is to; deter plagiarism, hold students accountable, determine the similarity of text to sources as well as enhance teaching and student learning. Turnitin further provides resources to assist in teaching research and writing skills, including proper citation.

The full presentation on intellectual property rights and plagiarism is presented in (Appendix 7).

PATENTING BY DR JULIUS MUGWERU, LECTURER IN THE DEPARTMENT OF BIOLOGICAL SCIENCES

Dr. Julius Mugweru took the participants gave an overview of patenting and what is required to patent. He highlighted the elements needed to produce commendable research data. He urged the participants to be dedicated to whatever they are doing, embrace failure and trying again and again as part of the success. Dr. Julius Mugweru noted the key attributes needed to produce a worthy research success. These attributes include but are not limited to readiness to accept failure, willingness to commit to hard work, the ability to troubleshoot, dedication, curiosity, passion for research, embracing independence and resilience. He mentioned the common causes of hardship when it comes to research which include; the inability to accept failure and choosing a research path for prestige rather than any real research interest.

In his presentation Dr. Mugweru elaborated on how the researcher can know that he/she has patentable results. First, he stated that you need to be excellent in whatever you're doing based on the type of research. Second, he stated that it is crucial to apply for a patent before submitting the manuscript and clearly show that part of that manuscript submitted that has been submitted to only be patented. He also emphasized the conflict of interest that might arise whenever a promising innovative idea is distinguished. To avoid this conflict, there has to be an author's agreement before collaborating. The main source of conflict in research is from funding and the corresponding authors in a publication. He urged authors who face these challenges to go back to the drawing board, as it is their work, not that of the supervisors. Dr Mugweru took the participants through a detailed journey of the research work he went through to generate and acquire a patent. For more details see Appendix 8.

PLENARY DISCUSSION QUESTIONS AND ANSWERS

Questions 1: Is it advisable to use the requirements of all journals when writing or choosing a specific one?

Answer: The students were advised to use one specific journal relevant to their work.

Questions 2: Do the publishing houses provide plagiarism reports after uploading the manuscripts, and are there risks associated with online manuscript preparation?

Answers: No, the publishing houses do not provide any plagiarism report. The students were assured that once the work is uploaded it is not unveiled to the public.

Questions 3: What are the impacts of publishing before thesis writing?

Answers: It was noted that there is no impact since whatever is published will be in the thesis. The thesis is usually the final product of the paper.

Question 4: Is there training on using software in data analysis, or will supervisors help navigate?

Answers: Yes, there is online training on software; in addition, the University will put software training and workshops into consideration.

Questions 5: Can we access the software from the University's ICT?

Answers: The students were encouraged to use free online software as some of the software, such as an R studio, are freely accessible online.

Question 6: What is the minimum sample size for secondary data?

Answer: One has control over primary data and not secondary data.

Question 7: What happens when one publishes in a journal not indexed in Scimago?

Answer: The paper will be declined by the University. The students were urged to withdraw the paper, but if one has more than one paper, one can leave it and publish the others in a journal(s) appearing in Scimago.

Question 8: What should one do when a publishing house rejects a manuscript?

Answer: The Director, BPS, noted that once rejected, address corrections provided by the publishing house and submit to another journal without delay.

Question 9: Can one publish one objective or combine all?

Answer: Yes, it is possible to publish one objective or a combination of the objectives. It also depends on how one formulated the objectives. For a PhD, every objective should yield a paper.

Question 10: Are there risks when using Turnitin before publication?

Answer: No, the work is not exposed to anybody unless the supervisor or the Librarian exposes it. The students were further advised not to use Turnitin from sources other than the University.

Question 11: Are there financial benefits of patenting?

Answer: Yes. The patent can be sold and income generated.

Question 12: Can one account for data cleaning?

Answer: It is possible to account for data cleaning, but one should have what is required, including the raw data.

Question 13: Does the University assist the students with resources?

Answer: Yes. The University allows the students to work in the laboratories for free and have access to other areas like the farms. Some Universities charge for laboratories.

Question 14: How can students outside the University have access to the library documents?

Answer: One is able to access the information using remote access while away from the University.

Question 15: Who is in the position to check for the level of plagiarism?

Answer: The supervisors and the librarian.

Question 16: What percentage of similarity is allowed at the University?

Answer: 15%

Question 17: Does one publish to graduate?

Answer: No. scholarly work is meant to expound more on knowledge.

Question 18: What is the risk in taking more time when writing a thesis?

Answer: The more one delay, the more they become outdated hence, the articles elapse and one is forced to learn new literature.

Question 20: When writing a proposal, should one cite from high impact journals or predatory?

Answer: If you cite from predatory journals then your work will be predatory quality and you will end up publishing in a predatory journal. Therefore, one should use articles from indexed high impact journals for citation.

CLOSING REMARKS BY PROF. KIPLAGAT KOTUT, DEUPTY VICE CHANCELLOR (ACADEMICS, RESEARCH AND EXTENSION)

Prof. Kiplagat Kotut, the DVC (ARE), closed the workshop by appreciating the Director BPS, facilitators, ICT team, rapporteurs and the students. He further noted a lot of information had been given to the students at the workshop, but it was up to them to translate it into meaningful research output. The DVC noted that academics is not about where you place yourself but where others place you as a scholar. Little knowledge as a scholar is dangerous and one must endeavour to be deeply rooted. One is only able to excel in academics if they love what they do but not when they are forced to. Do it for yourself and not for the teachers and the lecturers. Every student should focus on the quality of the proposal stating clearly the problem and the sample size. In his final remarks the DVC encouraged the students to start writing today.

CLOSING PRAYER

The closing prayer was offered by Dr. Zippy Njagi, a lecturer in the School of Business and Economics.

The workshop ended at 5.30 pm.

LIST OF PARTICIPANTS

1. Prof. Daniel Mugendi
2. Prof. Kiplagat Kotut
3. Prof. Paul Nthakanio
4. Prof. Nancy Budambula
5. Prof. Romano Mwirichia
6. Dr. Millien Kawira
7. Dr. Samuel Ndirangu
8. Mr. James Njue
9. Dr. Samuel Kariuki
10. Dr. Franklin Nyabuga
11. Dr. Duncan Njeru
12. Dr. Isaac Kaberia
13. Dr. Cyrus Ngumo
14. Dr. Collins Asweto
15. Dr. Zippy Njagi
16. Dr. Julius Mugweru
17. Dr. Hellen Njura
18. Dr. Mutiso Nthiwa
19. Ms. Victoria Nyaga
20. Mr. Peter Shinga
21. Ms. Hilda Kivuti
22. Mr. Charles Mugera
23. Mr. Timothy Kiara
24. Mr. Edwin Serem
25. Mr. Samson Sungwacha
26. Miss. Irene Mwangi
27. Mr. David Mbaabu
28. Ms. Mercy Wasonga
29. Ms. Cecilia Muthoka
30. Ms. Daisy Wairimu
31. Ms. Mary Wanjiru
32. Ms. Eunice Wangari
33. Mr. Kelvin Wambugu
34. Mr. Kennedy Ondiko
35. Mr. Jeff Kimanga
36. Mr. John Njeru
37. Ms. Rispher Wambui
38. Mr. Nathan Mwangi
39. Mr. Stephen Kariuki
40. Mr. Eric Ndege
41. Ms. Agatha Marigu
42. Mr. Esphorn Kibet
43. Mr. Daniel Kogi
44. Mr. James Karanja
45. Mr. Jonathan Saina
46. Ms. Brenda Odoi
47. Ms. Syombua Mwanza
48. Mr. John Ouma
49. Mr. Peter Njiru
50. Ms. Elizabeth Waithaka
51. Mr. Nelson Micheni
52. Mr. Andrew Cheyegon
53. Mr. Lawrence Matuku
54. Mr. Berechia Kibet
55. Ms. Doreen Gichovi
56. Ms. Snowy Ireri
57. Mr. Dennis Ndwiga
58. Ms. Nancy Munubi
59. Mr. Kelvin Nthiga
60. Ms. Margaret Wachira
61. Mr. Ryan Masai
62. Mr. Brian Mulonzi
63. Ms. Florence Kiptoo
64. Mr. Shadrack Kibet
65. Mr. Julius Letirio
66. Mr. Erick Muriuki
67. Ms. Clemence Cherera
68. Ms. Priscilla Njue
69. Ms. Racheal Gitiha
70. Ms. Eunice Munene
71. Ms. Grace Mwai
72. Mr. Moses Otieno
73. Mr. Fredrick Muthengi
74. Ms. Martha Macharia
75. Ms. Nzomo Mueni
76. Mr. Mwongela Mutinda
77. Mr. Timothy Ntongai
78. Ms. Margaret Njogu
79. Mr. Rainard Mutuku
80. Mr. Dancan Muriuki
81. Ms. Moreen Gatwiri
82. Mr. James Maina
83. Ms. Naomi Mutie
84. Mr. Jerry Sumba

85. Ms. Mercy Rugendo
86. Mr. Elvin Otara
87. Ms. Jackline Ndegwa
88. Ms. Stella Njiru
89. Mr. Peter Ng'anga'
90. Mr. Kelvin Wanjiku
91. Ms. Grace Kiring'u
92. Ms. Glory Mutua
93. Mr. Amerdave Machuka
94. Ms. Purity Wahinya
95. Mr. Shadrack Kiprotich
96. Mr. Calmax Ochieng
97. Mr. Bernard Kemboi
98. Mr. Vincent Kobia
99. Ms. Dorcas Mokuah
100. Ms. Sharly Nkonge
101. Ms. Maryliza Mukami
102. Ms. Caroline Kamuru
103. Mr. Francis Githiri
104. Ms. Catherine Mumo
105. Ms. Ephine Onyango
106. Mr. Alex Kandie
107. Ms. Caroline Mutuku
108. Mr. Albanus Musyoka
109. Mr. Dennis Kinini
110. Mr. Brian Otieno
111. Mr. Victor Saoke
112. Mr. Kevin Macharia

113. Mr. Wiclif Josphe
114. Mr. Mark Maluki
115. Mr. Maurice Wanyonyi
116. Mr. Edwin Mwenda
117. Ms. Annis Mugo
118. Ms. Purity George
119. Ms. Caroline Ndwiga
120. Ms. Mercy Chelangat
121. Mr. David Kivuti
122. Mr. Joseph Mugambi
123. Mr. Dennis Gechore
124. Ms. Ruth Shikanda
125. Mr. Kagwi Waweru
126. Mr. Edwin Nkauraki
127. Mr. Erick Ngaira
128. Mr. Evans Rutto
129. Mr. Francis Itemo
130. Mr. Peter Anunda
131. Mr. Samuel Maina
132. Mr. Prince Ojuka
133. Mr. Joseph Mumo
134. Mr. Paul Muriuki
135. Mr. Kelvin Munene
136. Ms. Jacqueline Gogo
137. Mr. Paul Maina
138. Ms. Mary Muhoro
139. Ms. Anne Syengo

APPENDICES

APPENDIX 1: VICE CHANCELLOR’S SPEECH

The Vice Chancellor’s speech was as follows:

- Members of University Management Board
- Facilitators and Resource Persons
- Deans, Directors and Chairmen of Departments
- Academic staff
- Postgraduate students
- Ladies and gentlemen

Good morning,

It is with great pleasure that I join you this morning for the Sixth Postgraduate Students Publishing Workshop. This workshop brings together about 130 postgraduate students from the University of Embu.

I take this opportunity to thank each one of you for attending and more importantly, the Director BPS and the University Librarian for organizing this workshop. I appreciate the willingness of Prof Romano Mwirichia, Dr Julius Mugweru, Dr Daniel Nthiwa, Dr Hellen Njura, Mr James Njue and Prof Nancy Budambula to facilitate this workshop. Thank you for supporting postgraduate studies at the University of Embu.

I wish to draw your attention to four (4) items.

1. Avoid plagiarism

Plagiarism is academic fraud that devalues research in universities and graduate employability. I therefore urge you to avoid plagiarism at all costs. Turnitin is the official plagiarism detection tool of the University of Embu. Please note that the acceptable maximum similarity level for all student works remains 15%. Endeavour to make it less than 15%.

Work closely with your supervisors and learn how to check your own work. The University has already trained your supervisors on how to use Turnitin. In the event you have challenges in using or interpreting the output from Turnitin, please feel free to consult the Library staff.

2. Attendance of postgraduate trainings

The different postgraduate trainings organized in the University, are intended to build your research capacity and improve your student experience. I note with concern that some students habitually fail to attend these trainings. Please note that you are required to attend these trainings. Director BPS please let me have the names of those students who are not in today’s training for action by my office.

3. Use of Electronic Resources

In addition to hardcopy books, the University has paid for 39 information databases through the Kenya Library and Information Science Consortium. There are other additional 35 open-access databases. The University Library has also subscribed to the Remote-X platform which allows for off-campus access to these electronic resources.

Out of the 39 databases, 26 of the subscribed resources have actively been used. Springer, Taylor and Francis, Wiley and Sage are the most accessed databases. From the statistics, the usage has improved from 34.5% in 2019 to 66.7% in 2021. However, I would like to see maximum utilization of all the databases especially by postgraduate students.

4. Publications by Postgraduate students

a) Publication requirements

At the University of Embu, a master's student is required to publish at least one paper before the degree is awarded. The PhD student is required to publish at least two papers before award of the degree. All the papers published by postgraduate students shall be in refereed journals from reputable publishers indexed in Scimago. This means that your research work must translate to meaningful research output.

Publication of one paper by a master's student and two papers by a PhD student is the bare minimum. A good master's thesis should yield two papers while a good PhD thesis should yield at least four papers. This is determined by having smart objectives. I urge you to aim high and go beyond fulfilling the minimum requirements.

b) Excellence in research and publications

Globally, universities are expected to be centres of excellence in training and research. Webometric ranking of universities is done globally twice in a year. As postgraduate students, you are expected to contribute to the *excellence* criteria in the ranking by publishing in high impact journals. Currently webometric ranking is based on journals indexed in Scimago.

c) Recommended indexing body

With effect from 1st March 2021, only papers indexed in Scimago are being accepted from postgraduate students at the University of Embu. At the moment, there are 32,954 journals indexed in Scimago. The Scimago database has journals in all areas of knowledge including business and education.

In the last few weeks, the Director BPS has given guidance on how to search for a journal in Scimago. The Director has also guided you on how to differentiate a journal that is currently indexed from one that was once indexed, but is no longer indexed in Scimago. I urge you to pay attention to these details to avoid frustration. It is also important that you work closely with your supervisors in the publishing process.

Going forward, the University will not entertain any student who feigns ignorance on this matter.

d) Publishing papers and writing the thesis

For timely completion of your studies, you will need to adopt an effective strategy since it takes 6 to 12 months to publish in most of the good journals. Immediately you have some data that can be analyzed, start writing your first paper. Focus on publishing your findings, objective by objective. Once the minimum requirements of one paper for masters and two papers for PhD are met, you can focus on writing your thesis or project report. The other papers can be written as the thesis examination process continues. Many students lose time by first writing the thesis before starting on the publications. Director BPS, please expound on this aspect during this workshop.

e) Progress in publishing

Despite the challenges, the University has made good progress in publishing by postgraduate students since the last workshop held in 2019. In the last one year, a number of postgraduate students published their research findings in high impact journals by reputable publishers such as Elsevier, MDPI, PloS and Springer. In particular, I commend the master's students who published in high impact journals for this effort.

In conclusion, I urge all participants to pay attention and attend the whole workshop. The University expects continuous improvement in original research and quality publications from all areas of knowledge. Today's workshop will enlighten you on how to prepare your manuscript and navigate the peer review process.

Ladies and Gentlemen,

I wish you a very fruitful time and I hope that you will benefit immensely from this training.

It is now my pleasure to declare the sixth publishing training for postgraduate students officially opened.

Thank you and God bless you all.

Prof. Daniel Mugendi Njiru, Ph.D
VICE-CHANCELLOR

**APPENDIX 2: ONLINE MANUSCRIPT PREPARATION TOOLS
BY PROF. ROMANO MWIRICHIA**

Online manuscript preparation tools

Prof. Romano Mwirichia

<https://authorservices.wiley.com/home.html>


<https://www.manuscripts.io/login#action=logout>

WILEY Home My Dashboard Authors Reviewers Editors Help

Author Services

With you every step of the way


[Manage my articles](#)



Find a journal for your research



Get help with preparing your manuscript






Learn about open access and open research



Find ways to promote your article

New blog and video content from The Wiley Network



<https://researcheracademy.elsevier.com>

Researcher Academy

Learn

Career path

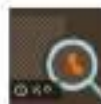
Blog

Berlino Calvo/Therichia



Learn

Researcher Academy provides free access to countless e-learning resources designed to support researchers on every step of their research journey. Browse our extensive module catalogue to uncover a world of knowledge, and earn certificates and rewards as you progress.



FUNDAMENTALS OF PUBLISHING
10 reviews to get – and use – an
ORCID ID

Research cycle Content library

RESEARCH
PREPARATION

WRITING
FOR RESEARCH

PUBLICATION
PROCESS

NAVIGATING
REF REVIEW

COMMUNICATING
YOUR RESEARCH

Fundamentals of publishing

You are probably familiar with the saying “publish or perish”. To ensure your publishing career thrives, we recommend investing a little time in understanding how the process works.

[Read More](#)

What you will learn

- An introduction to publishing and the key players
- Key points to consider when evaluating research
- A frank discussion on anonymous bias

<https://www.authoraaid.info/en/mentoring/dashboard/>

A global network of researchers

AUTHORAID

Search for: **SEARCH**

[Dashboard](#) [Sign out](#)

[HOME](#) [ABOUT](#) [NEWS](#) [MENTORING](#) [COURSES](#) [FUNDING](#) **[RESOURCES](#)** [FORUM](#) [FAQ](#)

You are here: [Home](#) > [Resources](#)

Featured Resources

Presentation: Preparing Grant Proposals - Facilitation Kit
This kit consists of nine modules, each containing a PowerPoint presentation and a set of facilitator notes. The notes expand on the content of the slides and provide guidance in facilitating the modules, which contain presentation and small-group work.

Toolkit: AuthorAID Research Writing Toolkit
Resources to run a participatory research writing workshop at your institution.

Video: "Get LIT: The Literature Review"
Video of presentation on preparing the literature review section of a thesis or dissertation. One of the most popular videos in our online research writing courses.

Toolkit: Gender Mainstreaming in Higher Education Toolkit
This toolkit has been developed for facilitators who are interested in introducing gender mainstreaming in higher education in order to challenge gender inequality.

Toolkit: AuthorAID Training of Trainers toolkit
Resources to run a training of trainers in research writing workshop at your institution.

SEARCH

TOPIC

Academic writing and style (100)

Career resources (29)

Communicating outside academia (28)

Data analysis and statistics (16)

Grant proposal writing (68)

Marketing and collaboration (8)

Oral and poster presentations (63)

Peer reviewing and editing (61)

Research and publication ethics (74)

Research literature (12)

Scientific writing (288)

The publishing process (76)

Training resources (58)

RESOURCE TYPE

<https://www.springer.com/gp/authors-editors/journal-author/journal-author-academy>

SPRINGER NATURE Home

[Log in](#)

Author tutorials

Writing a journal manuscript

Submitting your results is a vital step in the research lifecycle and in your career as a scientist. When you publish your research as a journal article, you make it possible for the scientific community to see it. Publishing your work allows you to get recognition for your results, and to exchange your ideas with the global scientific community.

We have prepared this tutorial to help you write the best article possible by providing you with advice to streamline your background reading and study design to manuscript structuring and figure presentation.

By the end of the tutorial you should know or be able to:

- ☒ Prepare prior to getting your research
- ☒ Structure your manuscript and what to include in each section
- ☒ Take the time out of your article and figure so that they clearly represent your most important results

You will also find the opportunity to test your learning by completing a quiz at the end.

Topics Covered

1. Structuring your manuscript
2. Submission & Article Types
3. Titles, Abstracts & Keywords
4. Introduction, Methods & Materials
5. Results
6. Figures
7. Discussion

Before you begin writing

<https://tools.edanz.com/my-manuscript>

MYmanuscript How Edanz Can Help You [Log in](#) [Sign up](#) [Help](#)

LEARN, WRITE, SUBMIT

Learn to write clear and concise papers.
Invite & collaborate with co-authors.
Find & submit to the best suited journals.

[Get Now](#)



WELCOME TO MY MANUSCRIPT / MY PROTOCOL

The free scientific writing tool designed to guide authors through every step of the publication journey.

My Manuscript/My Protocol helps you with selection, writing, collaboration, and submission. Our Manuscript/My Protocol dashboard has features that make it easy to write and submit your work.

MY MANUSCRIPT ACCOUNT FEATURES



Integrated Journal
Selector tool and
journal
recommendations



Automatic spelling &
grammar check



Invite & collaborate
with co-authors



Search online
databases for
references or import
from reference
management tools



Cover letter wizard



Secure automatic
backup and version
history



Dashboard & analytics
to track your writing
progress



Download and export
your project in
different formats

Going...

APPENDIX 4: EMERGING ISSUES IN STUDENT RESEARCH AND PUBLICATION AT UoEm BY DIRECTOR, BOARD OF POSTGRADUATE STUDIES

**Publishing Workshop
for Postgraduate Students
May 2021**

**Emerging issues in student research and publications
at UoEm**

Prof Nancy Budambula
Director, BPS
University of Embu

Publication requirements for UoEm Postgraduate students

INTERNAL MEMO

To: Vice-Chancellor

Date: 17th July 2018

From: Deputy Vice-Chancellor (ARE)

Ref: UoEm/DVC(ARE)/VC/VOL4/037

SUBJECT: PUBLICATION OF RESEARCH FINDINGS BY POSTGRADUATE STUDENTS

University of Embu came into effect in January 2016 with the following provisions:

1. A Masters students shall publish at least one (1) paper in a refereed journal, and
2. A PhD student shall publish two (2) papers in refereed journals.

During the 22nd meeting of the Board of Postgraduate Studies (BPS) held on 26th June 2018,

1. A candidate can submit a thesis or project for internal and external examination as the publication of the requisite number of papers in peer reviewed journals is in progress.
2. An oral defense (*viva voce*) shall only be scheduled once the publication requirement is met.

Role of UoEm supervisor in publishing postgraduate research

Dear Dr.

RE: APPOINTMENT AS SUPERVISOR FOR MBA CANDIDATE XXXXXXXXXXXX
REG. NO. XXXXXXXXXXXX

Following recommendations from the Department of -----and the School of you are formally appointed as a supervisor for MBA thesis.

Your role as a supervisor will be to direct and supervise the work of the student in so far as it relates to the program of study. In particular you shall be required to:

a) Maintain constant and effective contact with the candidate assigned to you.

-

-

e) Guide the candidate through the writing of the thesis and **publication of the findings.**

For any further clarification, please consult the undersigned.

Yours sincerely,

PROF. NANCY BUDAMBULA
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

NB/wx

Timelines and requirements for graduation

Progress reporting :

- Progress reports at least 2 for MSc and 4 for PhD, every 3 and 6 months,
- NOT all at once.
- Progress seminars at least 2 for MSc and 4 for PhD, progressively. **Student responsibility**

Plagiarism checking-

Not work of librarian. Student to work with supervisor

Final document by librarian is final, the value to be on certificate

Graduation times

- Intent to submit 3 months
- Thesis should be at BPS at least 3 months before graduation date
- You must have fulfilled publication requirements at least 6 weeks before graduation.
- Your name to be on graduation list 1 month before graduation.

Student/Supervisor Relationship

- Students participate in choosing their supervisors.
 - Appointed by Senate
 - Process Department, School, BPS
 - Removal of supervisors
 - Role of supervisor- to guide, to mentor.
 - **Lest you forget**
 - Baby steps, nurturing, adolescent tribulations, publication, greatness.
 - What a supervisor is not.
 - Due of the supervisor, **for all time.**
- Student supervisor relationship must remain professional**

Student and supervisor in publication process

Student first author- **mandatory** for it to be considered as a student's paper.
Senior researcher or Principal investigator (P.I) is the corresponding author.
Student drafts while supervisor reviews and guides.

Caution

Do not submit manuscript to journal without **consultation** with supervisor.
Please note manuscripts can be **recalled** by supervisor or P.I.
Criteria for authorship or acknowledgement.

Expectation

Master's thesis weighting- at least one paper.
PhD thesis weighting- at least three papers, 2/3 published before award.

General observations at Board level

1. Poor quality, simple objectives or “lazy” objectives



*Apply Bloom's Taxonomy when setting objectives (Bloom 1956) [Anderson and Krathwohl 2001](#)

Hypothetical case- Background of study WHO introduced a cancer vaccine in Kenya in 2017

- Objectives at higher levels of Bloom's taxonomy generate high quality publications.
- Objectives set at lower levels of Bloom's taxonomy generate manuscript unlikely to be accepted for publication in a serious journal.

Consider

- To find out the number of patients who visit Magharibi Hospital – **Simple and poor objective**

❖ **Manuscript title : One thousand patients visited Magharibi Hospital in 2019**
unattractive title

- To determine the prevalence of cancer among patients at Magharibi hospital 2016 to 2020 - **objective higher level-**

❖ **Manuscript title: Breast cancer in male patients at Magharibi hospital 2016-2020**
attractive title

2. Inadequate, wrong or “lazy” sample size.

More than half of the students have wrong or inadequate sample size - examples

- 10 farmers in Embu county
- 5 teachers in Nandi county
- 3 salons in Thika town

Consequences of wrong sample size

- Thesis- go back to the field
- Manuscript- data not representative-**verdict decline/reject**

Use globally accepted/used sample size determination formulae

- Krejcie and Morgan 1970, Israel 2009, Cochran 2007.
- Formula for adjusting sample size available. Refer to previous studies in high impact journals.

Avoid rhetorical Nancy and Nancy.....said

3. Sampling technique

More than half of the students can not explain how they sampled

- What is the unit of analysis?
- Will you use a census or sample
- How will you sample? – random, stratified, purposeful, snowball etc

4. Study design

More than half have no idea- Is it cross sectional, longitudinal, CBD, etc

See proceedings of First proposal and thesis workshop July 2015

- **PloS One** searches allow – to check methodology of previous studies

5. Challenges in data analysis

Was research methodology or statistical methods taught?

Common phrases

- Data will be analysed using percentages, means, modes....really ????
- Data will be analysed using SPSS..software
- Postgraduate students- must go beyond bar charts and percentages.
- Deliberate effort to find tools that have been used to synthesize or analyse data in other studies.

Comment improve depth of data analysis

Analysis must match the methodology, how data from each objective will be analysed

Improve the quality of journal that can accept your work- statistics, statistics, statistics

PloS One searches allow – to check data analysis of previous studies

6. “Lazy” questionnaires

Lifted from somewhere and have no relationship with the objectives

Scanty questions.

Socio demographic – if enriched can be an objective and give a publication

Sample size needs to be improved

Ways to improve the quality of data

- For example- increase number of years
- Geographical coverage –increase the area
- Diversify sample site informed by the problem being addressed

Serious data collection followed by in-depth statistical analysis and modelling

7. Indexing must be current or up to date

Sample: Journal of virology current,
Advanced materials letters- discontinued 2016

Journal of Virology

COUNTRY	SUBJECT AREA CATEGORY	PUBLISHER
United States	Agricultural and Biological Sciences — Botany — Botany Science — Botany and Microbiology — Botany — Botany	American Society for Microbiology
PUBLICATION TYPE	ISSN	CODING
Journal	0162-1561 (print) 1098-2643 (online)	1927-050

Advanced Materials Letters

Discontinued in Scopus on 1/1/2016

COUNTRY	SUBJECT AREA CATEGORY	PUBLISHER
India	Materials Science — Materials Science (interdisciplinary)	WILEY
PUBLICATION TYPE	ISSN	CODING
Journal	2151-2040 (print) 2151-2040 (online)	2010-030

Publishing paper(s) and writing the thesis or project report

- Which one comes first?
- How long does it take to write a manuscript?
- What are the steps in the review process?
- How long will it take to publish a paper?
- How long will it take to write a thesis?
- Pros and cons of thesis first?
- Storage?
- Peer reviewed thesis?

Budget

Item/Activity	Quantity/Description	Cost/Unit	Year 1 Amount	Year 2 Amount	Year 3 Amount
Consumables/Expendable supplies					
Fertilizer	CAN 50kg bag	5000	6000	5000	3000
Land preparation	Man days	500	5000	3000	1000
Elisa Kit	30 reactions units	500	10000	6000	2000
Field activities					
Training of enumerators	10 participants	1000	10000		
Focus group discussions	7 meetings	500		1500	500
Equipment (only items not commonly found in laboratories will be funded)					
PCR machine	BASF Germany	5000	5000		
Travel and accommodation costs					
Travel to station 1	200km	20	4000	3000	1000
Travel to station 2	50km	20	1000	500	
Accommodation	10 days	1000	10000	6000	2000
Documentation/publication/conferences					
Thesis preparation	7 bound booklets	500			3500
Conferences	Two local meetings	1000		1000	1000
TOTAL			51000	24000	14000

The will to learn

The six observations are based on about 90 theses examined (90x3=210 reports) in the last two years and about 200 proposals.

- How well you address the six observations will determine quality of thesis and strength of journal that can accept to publish your work.
- Some of the corrections were recommended at proposal level and ignored reappear at thesis.

Most of Board comments are based on the experience as journal reviewers or thesis examiners.

Frequently asked questions- [FAQs on BPS website](#)

Until you bend you can't be molded.

$$1+1=2$$

$$1+1=3$$

Designing Effective Questionnaires and Data analysis

Postgraduate workshop on 27th May 2021

Daniel Nthiwa

Lecturer, Biological Sciences

University of Embu

nthiwa.daniel@embuni.ac.ke

Data analysis

- Diverse software for data analysis e.g., **R Graphical User Interface [R-GUI] and R studio (open source)**, SPSS, STATA, SAS, Nvivo, QGIS (open source, spatial analysis), ARC View, Genstat etc.
- R software is interactive, has many functions for performing specific analysis and can be used in all the disciplines.
- Visit coursera to learn R and other free short courses
<https://www.coursera.org/>

The choice of the test used in data analysis depend on:

- **Type of data** – categorical, continuous, discrete, ranked, text data (notes) etc.
- **The distribution of the data**
 - Randomly collected data (Gaussian distribution) - Parametric tests – ANOVA, T test, regression analysis
 - Non-randomly data – Non-parametric equivalents e.g., Kruskal-Wallis instead of one-way ANOVA,
 - Poisson distribution e.g., drought patterns in Kenya - negative binomial regression analysis etc.
- **Design of the study** – e.g., case-control, cross-sectional, longitudinal, experimental, descriptive etc.
 - Initial analysis - descriptive analysis – measures of central tendency and dispersion.
 - From descriptive analysis to inferential statistics e.g., regression modelling.
 - Biological data has hierarchical organization – i.e., clustering which require adjustment in data analysis.

Past experience

- High impact journals e.g., PLOS require raw data to be submitted or deposited in a repository and a permanent link to the data be provided during manuscript submission.
- PLOS also require a **STROBE** [Strengthening the Reporting of Observational Studies in Epidemiology] checklist to be filled explaining how data analysis was done.
<https://doi.org/10.1016/j.ijisu.2014.07.013>
- Similar checklists also exist for other disciplines e.g., STrengthening the REporting of Genetic Association Studies (**STREGA**)—an extension of the STROBE statement
<https://doi.org/10.1002/gepi.20410>
- Check if STROBE guidelines have been developed in your discipline.

Questionnaires

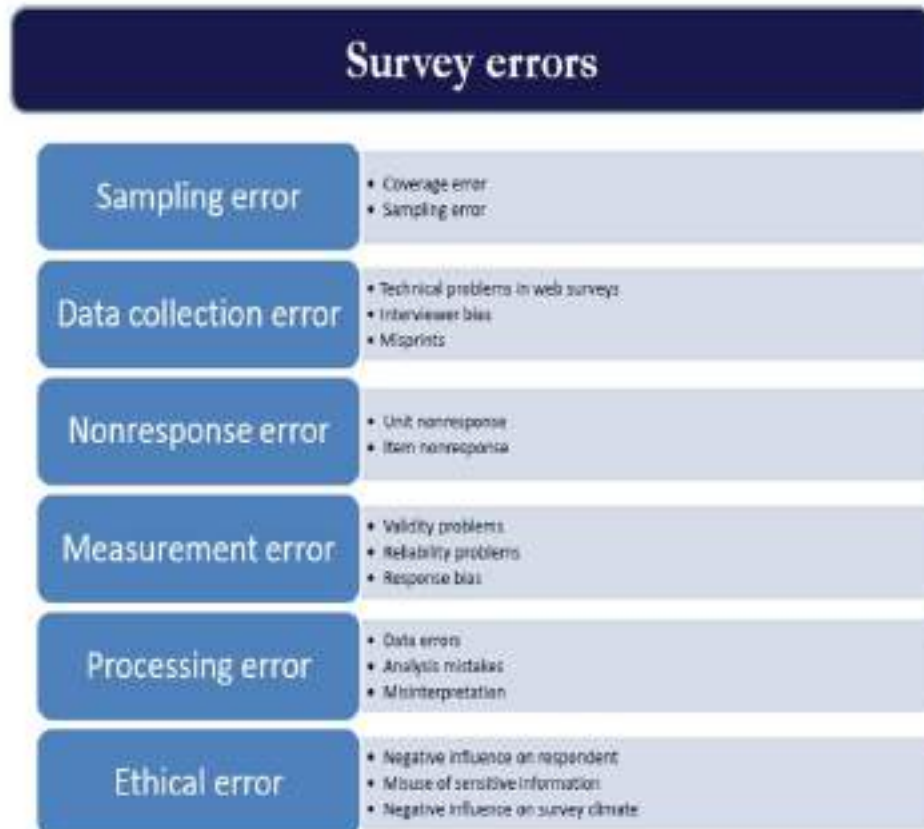
- Questionnaires - primary tool for data collection in many disciplines e.g., social sciences, veterinary research etc.
- The terms questionnaire and survey – synonymous?
 - Surveys often use questionnaires (with predefined questions) to gather data, often from a sample (not census).
- Less attention has been paid to the data collection aspects using this tool.

✓ Too many questions, some not used in the final analysis, vice versa?

✓ Questions copied from other studies that are not related to the outcome/dependent variable being investigated, wordy or poorly framed questions etc.

- For a questionnaire to be effective, its essential that the objectives and informational requirements of the study be established.





Questionnaire design

Tips for developing an effective questionnaire – the bolts and nuts.

1st step: Identify what should be measured,

e.g. Patient recovery after surgery.

2nd step: To translate theoretical /complex concepts into measurable questions.

e.g., Ability to move, run, jump

Pain – what scale to use?

3rd step - Design the question

When drafting questions, keep in mind the following:

- Who is responding and their level of knowledge.
- Whether or not the data are readily available.
- The response burden – the length and complexity of the questionnaire.
- The confidentiality and sensitivity of the data being collected.
- The reliability of the data – validity of the questions.
- Whether the interviewer or respondent might find any of the topics embarrassing.
- How the data will be processed (coding and computer entry).

Once a draft question is prepared, ask yourself:

- Will the respondent understand this question? – the question must be clearly worded in a non-technical manner.
- Will the respondent know the answer to the question or has to seek out additional information to be able to answer it?
 - If additional information is required, the respondent may skip the question or fabricate an answer.
- Are the possible responses clear with an appropriate method of recording the response?
- Should the question be open or closed-ended – merits/demerits.

Open-ended questions

- Applicable to qualitative research.
- Allow the participants to express their views and thoughts on the subject matter.
- Can be used in the hypothesis generation phase of research – if it is necessary to identify all the issues pertaining to the research subject.
- Administered through interviews.
- Generate data that may not be applicable for standard statistical analysis.
- Analysis – identifying of common themes (NVivo), text mining using R software etc.

Closed-ended questions

- Applicable to quantitative research.
- A researcher can choose from a range of possible options. They include:
 - Checklist questions (i.e., check all the options that apply).
 - Two choice / multiple choice questions – mutually exclusive (do not overlap) and jointly exclusive (cover all possibilities).
 - Ranking questions (rank the options in order of priority)
- Closed questions are easier to answer while maintaining consistent responses. Easy to code the responses prior to data entry.

Basic question development

- Simple language – wording of the questions has an impact on the validity of the results.
- Avoid lengthy questions – each question should have <20 words.
- **One question at a time.**
- **Consistent meaning.**
- **Avoid leading questions.**
- **Avoid double negative questions.**
- Avoid assumptions that may not be true.
- **Avoid hypothetical questions.**
- Avoid abbreviations and complex or technical terminology.

Simple language

- Use familiar terms.
- Use simple sentence structure.
- Use as few words as possible.
- **Question and response options that match.**

Question and response options that match

Is the payment sometimes delayed?

- ☐ No, never
- ☐ Yes, but rarely
- ☐ Yes, sometimes
- ☐ Yes, often

How often is the payment delayed?

Never, seldom, sometimes, often

How many months has the payment been delayed during the last year?

None, 1-3 months, 4-8 months, 9-12 months. [NB –responses do not overlap]

Need of definitions?

1. Did you eat breakfast yesterday?

OR

2. Did you eat breakfast yesterday? [meal eaten before 10.00 am in the morning, that included some protein such as egg, meat or milk, some grain such as toast or cereal and some fruit or vegetable including juice.)

One question at a time

1. Do you want to be rich and famous?
2. Can you lift and carry grocery bags?

Solution: Split each into 2 questions.

Consistent meaning

Do you seek expertise from other departments for managing patients' pain relief?

- ☐ Yes, always
- ☐ Yes, often
- ☐ Yes, sometimes
- ☐ No, never

What does always mean?

We have never this competence in our department = BAD

We always ask for help when need it = Good

Could have asked 2 questions.

Consistent meaning

1. Are there dogs in the farm, Yes..... No....., if yes, How many?.....
2. How long have you had dogs in the farm?
3. Have you ever dewormed your dog(s) last year? Yes..... No.....

Leading questions

Many employees at the University of Embu enjoy working overtime. What are your thoughts on this?

- ☐ Completely agree
- ☐ Partly agree
- ☐ Partially disagree
- ☐ Don't know

Double negative

Does it happen that patients don't get the best possible symptom management for the following symptoms:

	Yes, always	Yes, often	Yes, sometimes	No, never	Don't know
Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheezy breathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No it never happens that they don't get best possible = Always get the best

Two suggested solutions:

How often do the patients get the best possible symptom management for the following symptoms:

	Never	Sometimes	Often	Always	Don't know
Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheezy breathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How often do the patients have symptoms that could have been relieved for the following symptoms:

	Always	Often	Sometimes	Never	Don't know
Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wheezy breathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Hypothetical questions

E.g., If you had cancer would you agree to have an extremely painful treatment if the chance of being cured was 1 out of 1000?

- Such questions force respondents to imagine scenarios that they may be clueless about.
- Different answers to the question are generated - difficult to code and analyze.

Pre-testing of questionnaires

- Questionnaires need to be pre-tested (pilot test) before they are applied to the study population to obtain feed back on the clarity of the questions.
- Allows the investigator to identify questions that are confusing, ambiguous or misleading.
- Identifies questions that the respondents will be unable or unwillingly to answer or perhaps additional categories required for multiple-choice questions
- Pre-testing also serves to estimate the time required to complete the questionnaire.
- Done on a small sample from the study population.

Work together to design effective questionnaires

Subject expert

- What questions to ask.
- Knowledge of the target population.

Survey methodologist

- How to ask the questions.
- Planning fieldwork.

Data analyst / statistician

- How to analyse the questions.

Users of the information

- How questions are to be used.

Additional reading materials – open access

1. Rowley, J. (2014). Designing and using research questionnaires. *Management and Research Review*. Vol. 37 No. 3, pp. 308-330.
<https://doi.org/10.1108/MRR-02-2013-002>
2. Kazi, A. M. & Khalid, W. (2012). Questionnaire designing and validation. *Journal of the Pakistan Medical Association*, 62(5), 514.
3. Kasunic, M. (2005). *Designing an effective survey*. Carnegie-Mellon Univ Pittsburgh PA Software Engineering Inst.

**APPENDIX 5: WHAT EDITORS AND REVIEWERS LOOKS FOR
BY PROF. NANCY BUDAMBULA**

**Publishing Workshop
for Postgraduate Students
May 2021**

**What editors and reviewers look for:
Ten lessons from my journey**

Prof Nancy Budambula
Director, BPS
University of Embu

1. Instructions to Author – How to prepare your manuscript

- Must be painfully followed, to the letter
- Checked by – Editorial or Administrative Assistant before review starts

Date: Wednesday, March 11, 2009, 9:31 PM

If you cannot see this page properly, please [click here](#).

Dear Dr. Budambula,

Indian Journal of Medical Microbiology has received your manuscript entitled "Highly Active Antiretroviral Therapy (Haart) At Vihiga District Hospital In 2007" for consideration for publication. The reference number for this manuscript is "IJMM_09_90". Kindly quote this in correspondence related to this manuscript.

Please note that the instructions provided by the journal have not been followed. Detailed remarks on this are available from our site <http://www.journalonweb.com/ijmm>.

You are requested to make the necessary changes in the manuscript within five days to start the review process.

2. No “small research”- Kwange 4th year project

A student in a university in Kiambu, from Migori and doing research in Vihiga

Cited 8 times including

- A systematic review and meta-analysis Oxford Academic Publishers
- Cited in The Lancet Infectious Diseases- Elsevier
- Cited in Asia Pacific Journal of Tropical Disease- Elsevier
- Cited in PloS One

Indexed in Pubmed- U.S National Library of Medicine, NIH



3. Corrections must be done and ... diligently

-Categories: unaltered, minor, major/revision, reject

-Rounds of corrections

Major Revisions requested WATE87

Yahoo/Inbox



The Editors at Water, Air, & Soil Pollution <carlo.schrauwen@springer-sbm.com>

To: nbudambula@yahoo.com



Jun 19, 2005 at 4:45 PM

Dear Budambula,

We have received the reports from our advisors on your manuscript, "Metal Status of Nairobi River Waters and Bioaccumulation of Metals in *Labeo Cyldricus*", which you submitted to Water, Air, & Soil Pollution.

Based on the advice received, I feel that your manuscript could be reconsidered for publication should you be prepared to incorporate major revisions. When preparing your revised manuscript, you are asked to carefully consider the reviewer comments which are attached, and submit a list of responses to the comments.

Please also submit your response as separate submission item.

The major corrections- Single spaced three A4 pages
- then sent back to reviewers. Ticked off one by one


Highlights of some corrections


- There is no clear statement about the purpose of this study other than to measure metal concentrations in water and fish tissues.
- No quality assurance or quality control (QA/QC) procedures for metal determinations were employed in this study (or, if they were, they were not reported).
- Spatial and temporal trends might prove to be interesting in a 'research' context.
- Relationships between the spatial and temporal environmental metal trends, fish tissue metal accumulation, and electrolyte status might have proved to be quite interesting.

Key action- Re analysis of data. More than two weeks fulltime

4. Scientific/academic rigour

- Most painful paper to publish,
- Outside my expertise- chemistry
- Encouraged
- Do not limit yourself in publishing

 SpringerLink



Water, Air, and Soil Pollution
January 2006, Volume 169, Issue 1-4, pp 275-293 | [Cite as](#)

Metal Status of Nairobi River Waters and Their Bioaccumulation in *Labeo Cylindricus*

Authors: [M. L. M. Budimbula](#), [E. C. Mwachiro](#)

Some considerations in scientific/academic rigour

- What is the **Problem**, hypotheses or research questions?
- *What is/are **objective(s) of your study?**
 - Positive and negative controls, ethics and regulatory permissions ERC, IBC, etc
 - Will your experiments/study have enough statistical power to give meaningful or useful results?
 - Can your experiments/or study be replicated.
 - Is your sample size large enough to draw valid conclusions?
 - Which statistical tests will you use for your analysis?

Sample Size is King

Sample size, sample size, sample size, sample size, sample size

5. Differentiate thesis from publication

- Thesis reports everything/all the work done – “talks” to examiners, 100 or 200 pages
- A publication focuses on results. – “talks” to peers, often 20 to 25 pages
- Mostly 5000 to 7000 words
- **The title of publication should highlight the results. Be as descriptive as possible and use specific rather than general terms**

Remember the Title and abstract are the most visible parts of your article

Sample

Thesis title/ Chapter title

Distribution of Hepatitis B virus genotypes and frequency of its mutants among Blood Donors in selected regional blood transfusion centres in Kenya

Publication title

Hepatitis B virus subgenotype A1, occurrence of subgenotype D4 and S gene mutations among voluntary Blood Donors in Kenya. *Virus Genes* 47: 448-455

A thesis can yield several publications, with totally different titles

6. Sample Manuscript Titles

Sample 1

- Tuberculosis is common killer in Kenya -*unattractive title*
- Drug resistant tuberculosis in patients in patients at Mashariki Hospital 2010 to 2020 -
attractive title

Sample 2

- Girls perform poorly in secondary school mathematics- *unattractive title*
- Effect of competency based approach on performance in mathematics by girls in secondary schools in Lamu 2020 to 2025

attractive title

Sample 3

- Hair salons in Muranga Town are run by women -*unattractive title*
- Reduced interest rates improved financial performance of hair salons in Muranga Town *attractive title*

7. Facing Rejection; Rejection will come Only a matter of time before it visits you

Don't Die!

- Pick yourself up, dust yourself off and try again

Ms. No. JGV-D-15-00518

Hepatitis B virus is the Leading Cause of Viral Hepatitis in Kenya
Missiani Ochwoto; James H. Kimotho; Julius Oyugi; Fredrick Okoth; Henry Kioko; Simeon
Mining; **Nancy L.M. Budambula**; Elizabeth Giles; Anton Andonov; Elijah Songok; Carla
Osiovy

Dear Dr Osiovy,

Thank you for submitting your paper to Journal of General Virology. Before being sent to referees, all papers are pre-screened by an Editor to determine their suitability for consideration by the journal.

I have reviewed your paper and for the reasons indicated below, I do not feel it is appropriate for publication in JGV. It will therefore not be sent out for further review.

Editor
Journal of General Virology

Use the comments from reviewers to improve the paper...meaning even if rejected, do the corrections diligently.
-Submit to another journal

Paper rejected July 2015 by JGV, published 2016 in BMC-Springer
Indexed in PubMed.

Cited 38 times including Nature, Springer, PLoS, Elsevier

Ochwoto et al. BMC Infectious Diseases (2016) 16:101
DOI 10.1186/s12879-016-1409-2

BMC Infectious Diseases

RESEARCH ARTICLE

Open Access



Hepatitis B infection is highly prevalent among patients presenting with jaundice in Kenya

Misslari Ochwoto¹, James H. Kimotho¹, Julius Oyugi², Fredrick Okoth¹, Henry Koko³, Simeon Mining⁴, Nancy L. M. Budambula^{5,7}, Elizabeth Giles⁶, Anton Andonov⁶, Elijah Songok¹ and Carla Osiowy^{6*}


8. Why are manuscripts are rejected: Which one -Guilty of ?

1. Inadequate Sample Size
2. Outside the aim and scope of the journal.
3. Poor study design, poor research questions or poor objectives
4. Poorly written papers, jargon, grammar.
5. Non adherence to instructions to author.
6. Inadequate or wrong methodology, data can not be validated.
7. Poor data analyses.
8. Does not contribute new knowledge or does not interpret existing knowledge in a new way.
9. Lack of originality of thought or significance.
10. No clear conclusions were drawn.
11. Violation of research ethics; plagiarism, ERC, etc

How significant is your study?

Research Article | Open Access

p16^{INK4a}/Ki-67 dual stain cytology for cervical cancer screening in Thika district, Kenya

Caroline Wangei Ngugi, Dietmar Schmidt, Karanja Wanyoro, Hamadi Boga, Peter Wanzala, Anna Muigai, John Mbiti, Magnus von Kriebel Doeberitz and Miriam Seuschenbach 


Infectious Agents and Cancer 2015, **10**:25

<https://doi.org/10.1186/s13027-015-0023-2> | © Ngugi et al. 2015

Received: 9 April 2015 | Accepted: 9 July 2015 | Published: 11 August 2015

Soil fertility

Potential of indigenous bradyrhizobia versus commercial inoculants to improve cowpea (*Vigna unguiculata* L. walp.) and green gram (*Vigna radiata* L. wilczek.) yields in Kenya

Samuel Mathu, Laetitia Hermann, Pieter Pypers, Viviane Matiru, Romano Mwirichia & Dr Didier Lesueur 

Pages 730-763 | Received 05 Apr 2012, Accepted 12 Oct 2012, Published online 13 Dec 2012

 Download citation | <https://doi.org/10.1080/00350766.2012.741041>

Most probable predictors of rejection your papers- Discussion

1. Inadequate Sample Size. ● ● ●
2. Poor study design, poor research questions or poor objectives. ● ●
3. Does not contribute new knowledge or does not interpret existing knowledge in a new way. ● ●

Look out for the unlikely predictor

- Contradicting status quo
- Upsetting industry

The unlikely predictor; upsetting industry?

Hindawi
BioMed Research International
Volume 2020, Article ID 4945608, 10 pages
<https://doi.org/10.1155/2020/4945608>



Research Article

Cervical Dysplasia, Infection, and Phylogeny of Human Papillomavirus in HIV-Infected and HIV-Uninfected Women at a Reproductive Health Clinic in Nairobi, Kenya

Agnes Omire¹, Nancy L. M. Budambula², Leah Kirumbi³, Hillary Langat¹,
Danvas Kerosi¹, Washington Ochieng⁴ and Raphael Lwembe¹

¹Kenya Medical Research Institute, P.O. Box 54840-00100, Nairobi, Kenya

²University of Nairobi, P.O. Box 640100, Nairobi, Kenya

³Kenya Medical Research Institute, P.O. Box 54840-00100, Nairobi, Kenya

⁴Center for Virus Research in Therapeutic Sciences, P.O. Box 59837-00200, Nairobi, Kenya

Correspondence should be addressed to Agnes Omire; a_omire@kri.ac.ke

Received 24 January 2020; Revised 8 May 2020; Accepted 4 June 2020; Published 17 June 2020

9. Dream or fact?

Is publishing in high impact journals achievable?

- Decision on the quality of journal you will publish in is made the day you set your objectives
- Objectives set at low levels of Blooms taxonomy will **not** generate data publishable in a high impact journals.
- Poor objective(s) will generate poor data and will result in a poor manuscript publishable in low quality journal.

During objective setting,

- consider the kind of journals that can accept your work.
- Read sample articles from the journals you intend to publish in .
- Interrogate your methodology, can it generate data that can be published by target journal?

10. The questionnaire is a valuable research tool

A valuable research tool in the Era of multidisciplinary research

Human angle; be exhaustive on socio-demographics - gender, age, education, marital status etc

Optimize the questionnaire to answer the research questions/objectives

Paid dearly for failing to ask a simple but key question:

Are you taking ARV? For how long have you been taking?

(Hindawi)
Interdisciplinary Perspectives on Infectious Diseases
Volume 2019 Article ID 3713410, 8 pages
<https://doi.org/10.1155/2019/3713410>



Research Article

Prevalence and Risk Factors of Human Herpes Virus Type 8 (HHV-8), Human Immunodeficiency Virus-1 (HIV-1), and Syphilis among Female Sex Workers in Malindi, Kenya

M. M. Nzivo ¹, B. M. Lwembe,² E. O. Odari,¹ J. M. Kang'ethe,³ and N. I. M. Budambula⁴

From the questionnaire study Nzivo et al 2019

Before you go to the field read, read, read and ensure.

- You have all the possible questions ever asked on the subject on your questionnaire.

-No question is useless. Make no assumptions.

Look out for the **unexpected results**— Being married was the strongest predictor for getting HHV-8 and HIV.

Note: Questionnaire was (one objective)

The laboratory study (two objectives) did not yield anything novel.

Questionnaire had 30 questions N=268. Sample questions

1. Marital status: Married/ co habiting ☐ Single ☐ Divorced /widowed/separated ☐
2. Level of education None ☐ Primary ☐ Secondary ☐ Tertiary ☐
3. Have you ever been tested for HIV? Yes ☐ No ☐
4. If YES, What is your HIV status? Positive ☐ Negative ☐ N/A ☐
5. Have you had any Sex, Transmitted Diseases in the past 5 years Yes ☐ No ☐
6. If YES, Which one ? Syphilis ☐ Gonorrhea ☐ Genital wart ☐
7. Do you use alcohol? Yes ☐ No ☐
8. Are you using intravenous drugs? Yes ☐ No ☐
9. At what age did you first engage in sex? Less than ☐ above 18 ☐
10. How many years have you been a sex worker? 1-3 ☐ 4-6 ☐ above 6 ☐

My experience taking student from manuscript to publication

Diverse; worst form of torture sometimes great joy

- Difficult to teach how to write.
- Prolific writers.

Different approaches from baby sitting, spoon feeding, the cane.

Lesson 1: Corrections

Teacher turned student, Learning from my students

- Questionnaire
- Binary logistic regression, odds ratio OR
- Software Mega 4, now Mega 10

Lessons on publishing from quarantine 2020

1. Market principles of supply and demand.
2. Over supply of manuscripts- Five returned after 6 months.
3. Humility – hawking of manuscripts.
4. Political landscape - sales and marketing.
5. Time is of essence.
6. The Title-local or global.
7. Scope of influence/applicability.

No Magic

1. Instructions to author
2. Listening to Reviewers
3. Hardwork

Commend

- ✓UoEm students who have done well- MSc doing 2 papers,
 - ✓Some PhDs will get to 4 or 5 papers, with real innovations: models, tools, products
- Your turn

END

A Student's Experience in Publishing

By: Dr. Hellen Njura

A Brief History of my PhD Journey

- I registered and started the journey in mid March 2015 at UoEM.
- Presented a concept paper at the department and went on to process my proposal.
- I had the interest for the research area but no adequate knowledge on the same.

I was in dilemma...?



Which Way?



Retracing my steps back was the option

- A year later, I started on an area I had passion for and adequate knowledge.
- Processed my proposal.
- Made several corrections with my supervisors.
- Made oral seminar presentations.
- Proposal approved by end of 2017.
- A point where my **publication ideas** started **ripening**.

Experience in the Field

A step by step tread with the supervisors.

- Smooth data collection and analysis for six months.
- Presented my results
- I already had four manuscripts for review by end of 2018.
- **Regret , rejection and resubmission** was the opening remarks in my emails.

The Fast and Unsure Route

**Oh no,
Another
Bad
Decision**



The beginning of darkness at the end of the tunnel.

- Two of my good papers fell in **predatory** hands-I have never retrieved them.
- Well.... the third was **accepted** by a **high impact journal** with minor revisions.
- The fourth.....**lacked reviewers** after the second round of review.
- This came to my attention after 8 months, a month after 2019 graduation.

The Hour of Dawn

- Retrieved the delayed manuscript
- Resubmitted it to a high impact journal and Uriiiiiiii- accepted after two months.
- Was quite sure I had **accomplished** the mission.

How did I reach here?

- I **learnt through my own mistakes**-took my best ideas, tested them, measured my success, ready to fail, to be wrong to start over again with the lessons learnt.
- **Built grit** in my scholarly work through **growth mindset**- The ability to learn changes with efforts, it is not fixed to IQ(Duckworth, A. L (2012).
- I **understood** myself as a scholar, professional, mother and a wife who had to balance these roles- I developed a **daily programme** for my books.

...cont...

- I consulted widely –formally and informally
- I **hardly** missed any **seminar or workshop** that was organized by UoEm for the postgraduate students.
- I took **every challenge** as an **opportunity** to move on e.g. Corona time in year 2020- I stayed home-stayed safe to wind up my studies.

Resilience and Perseverance





Observations made

The students publishing journey is full of:

- **Mistakes:** e.g publishing in predatory journals
- **Frustrations** e.g
 - ✓ trying out research funding in vain
 - ✓ Loss of loved ones at prime time of your studies
- **Lessons -**
 - ✓ Get new ideas from workshops and seminars
 - ✓ never lie at the boundary-have more than the minimum number of articles required.

Achievement – wins it all.

- I developed **seven papers** from my research objectives **four already published in high impact** journals.
- I am a fully baked scholar from UoEM, who can publish in high impact journals and through induction I can help bake others like it is the case today.

Recommendation for successful publishing

- ✓ Start as early as the proposal development stage, you will reach out for the best journals and not in a rush.
- ✓ Do not limit yourself to the number of articles required for you to graduate, develop more papers to boost your long life scholarly skills not just for your certificate.
- ✓ Consult widely to help you make informed decision in choosing the right journal.

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- ✓ Consult widely to help you make informed decision in choosing the right journal.

Punchline



- *Grit- Is the power of passion, resilience and perseverance that can predict your long term academic success.*
- Therefore sustain interest and effort towards long term goals and defer short term goals.
- *Publishing is doable and achievable, with commitment and sacrifice.*
- **Perseverance + Resilience + Grit= Success**

The End

**Thank you and all the best in
your publishing journey**

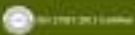
God Bless You

APPENDIX 7: INTERLLECTUAL PROPERTY AND PLAGARISM BY MR. JAMES NJUE





UNIVERSITY OF EMBU
Intellectual Property and plagiarism Presentation

By:
James Njue
University Librarian

 CC BY-NC-SA 4.0 International

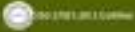
Knowledge Transforms

 CC BY-NC-SA 4.0 International




Definitions

- **Intellectual property (IP)** refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce
- **Copyright** - Legal right to control the reproduction of any original work. To legally reproduce a copyrighted text you need written permission from the copyright holder. This protects the right of the authors to benefit from their own work
- **Plagiarism** – It is using others' ideas and words without giving them credit/the act of presenting other persons' work or ideas as your own
- **Fair use** - Under this copyright law, you can quote a brief passage from a copyrighted text for an academic purpose, and not be infringed on copyright. To avoid plagiarism you must cite the source properly and also identify the passage as a quotation
- **Turnitin** - An online plagiarism-detection system and a complete web-based class management solution.

 CC BY-NC-SA 4.0 International

Knowledge Transforms

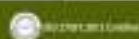
 CC BY-NC-SA 4.0 International



Intellectual Property

Intellectual Property is divided into two categories:

1. **Industrial property**, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source
2. **Copyright**, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs



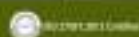
Knowledge Transforms



Intellectual Property

Basic facts authors need to know

- Copyright protection is automatic once a work is fixed in a tangible medium
- Joint authors each have full and equal copyrights
- Copyright can be transferred only in writing
- Not all rights have to be given away – author/copyright rights can be broken apart



Knowledge Transforms





Intellectual Property cont...

Author's rights

- Copyright is a "bundle" of rights and these exclusive rights include:
 1. Reproduce the work in copies
 2. Distribute copies of the work
 3. Publicly display or perform
 4. Make derivatives, adaptations, translations
 5. Authorize others to use any of these rights

Author options

- **Transfer all rights to publisher** (traditional)
 - Author no longer has control over work
- **Licensing (Creative Commons)**
 - Enables the copyright holder, whether author or publisher, to license partial rights to other parties
- **Addenda (SPARC, Science Commons, CIC)**
 - Added to copyright transfer agreements and refer the desired rights to the author.
 - Leads to negotiations between author and publisher



CC BY-NC-SA 4.0

Knowledge Transforms



CC BY-NC-SA 4.0



Intellectual Property cont...

Authors - Where to begin?

- Know what rights you want to retain.
- Identify a publisher that allows author's to retain most rights.
- **READ THE PUBLISHERS AGREEMENT!**
- Include an Addenda to the publisher agreement.
- Opt to publish in an Open Access journal and use various licensing resources, such as Creative Commons.
- Beware of predatory printers/publishers



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Plagiarism:

Types of Plagiarism

- **Stealing** - This is exactly what it sounds like! If you take a sentence, or even a unique turn of phrase, and pass it off as your own, this is stealing.
- **Patch working** - Using words and phrases from a source text (that may or may not be acknowledged), and patching them together into new sentences.
- **Insufficient Paraphrasing** - Taking an author's words and changing them slightly, without quoting the actual text is plagiarism. Say it entirely in your own words, otherwise put the author's text in quotes and reference the source.
- **Misquoting** - When you quote another author in your own work, always be sure to quote exactly what was said. Direct quotes are when you use an author's exact words. Indirect quotes are when you report the spoken or written words of an author, but not his/her exact words. Both must be cited!!
- **Duplicating Publications** - You can not reuse/recycle your own paper for use in another assignment without explicit permission from the instructor. If you cite your previous works, remember to cite yourself!



Plagiarism: cont..

Common mistakes

- Cut & paste from electronic/Internet sources without using quotes or properly citing the source
- Download audio, visual, or arts without proper permission (Copyright Issues)
- Cite statistics/facts without the source, unless they are common knowledge

Basic guidelines to avoid plagiarism

- Write down your own thoughts and questions before looking into sources. Use these notes to keep track of changes in your ideas
- Don't rely too much on one source or you might use that person's thoughts instead of your own
- Cite the sources of all ideas, opinions, facts and statistics that aren't common knowledge.
- You do not need to cite if you are using universally understood concepts or common knowledge
- When in doubt, CITE

Mitigating Plagiarism

- Quoting and citing,
- Paraphrasing and citing,
- Applying all apt academic writing skills that synthesize others ideas and attributing,
- Using citation and reference software - *Mendeley*
- Using text matching software to detect literary theft.

Information Literacy Training - 2020



Plagiarism: cont..

Using copyrighted materials fairly

Consider these four questions...

- **What is the purpose of the use?** Educational, nonprofit, and personal are usually considered fair
- **What is the nature of the work being used?** Often imaginative and unpublished materials can only be used when the copyright holder gives permission
- **How much of the copyrighted work is being used?** The use of a small portion of text for academic purposes is generally seen as more fair than a whole work for commercial purposes. One guideline is to quote up to 50 words from an article and 300 words from a book. Images and multimedia clips are considered entire works.
- **What effect would this use have on the market for the original?** Seen as unfair if it would hurt the sales of the original
- **WHEN IN DOUBT ASK PERMISSION**



Anti-plagiarism Software - Turnitin

Turnitin's Purpose

- To deter plagiarism.
- To hold students accountable.
- To determine the similarity of text to sources.
- To enhance teaching and student learning.

Benefits

- Deters plagiarism before it happens.
- Saves time in the investigation of the originality of student work.
- Allows for efficient citation verification.
- Provides documentation of any alleged plagiarism.
- Provides resources to assist in teaching research and writing skills, including proper citation.



Anti-plagiarism Software – Turnitin cont...

What Turnitin Searches

- A current and archived copy of the publicly accessible Internet (more than 4.5 billion pages indexed).
- Millions of published works from databases and publishers.
- Millions of student papers already submitted to Turnitin since 1996.



Anti-plagiarism Software – Turnitin cont...

How Turnitin Works

- Your supervisor create a class and an assignment.
- Supervisor creates an account for you and you activate it upon receipt of activation email by turnitin.
- You submit an electronic copy of your work to Turnitin, which compares it to find similarity.
- Turnitin generates an “Similarity report” which indicates the degree of textual similarity between the paper and outside sources, and provides those sources.



Anti-plagiarism Software – Turnitin cont...

How Turnitin Works

- You may also send your softcopy to:
postgraduatesturnitin@embuni.ac.ke
- You will receive an email containing your similarity report from the same email address.
- The threshold for University of Embu is 15%. If the similarity is below that, you will be given an anti-plagiarism clearance certificate for your proposal/project or thesis by the library

IDEAL Checking Model



2022-2023 Academic Year

Knowledge Transforms



2022-2023 Academic Year



UoEM Plagiarism policy

- Minimum similarity level
- Submissions
- Supervisors role
- Exclusions
- Similarity reports
- Continual improvement
- In case of any further enquiries, contact us through:
 - library@embuni.ac.ke
 - askalibrarian@embuni.ac.ke
 - [LiveChat at the library webpage](#)



2022-2023 Academic Year

Knowledge Transforms



2022-2023 Academic Year

FAQs

- Who should check the documents
- What causes a spike in %age when document is checked
- What is acceptable %age
- What is submitted as report
- When are documents supposed to be checked
- How do I avoid having a mirror of document in Turnitin
- What is the acceptable format of report for submission
- What if I forget my password
- Can students check for themselves
- Can an instructor share his/her logins with supervisees?

Informatics Literacy Training - 2020

APPENDIX 8: PATENTING BY DR. JULIUS MUGWERU

PATENTING



Julius Mugweru (PhD)
Department of Biological Sciences

2018 11 7

Outline

1. Definitions
2. Requirements for patentability
3. Basic research
4. What NOT to publish before patenting
5. How do you know you have patentable results
6. My journey to patenting-challenges
7. Opportunities
8. Lessons learnt.

Definition

what is a patent?

s

❖ A patent is an **intellectual property** (IP) right for a technical invention



❖ An **invention** uses **technology** to solve a specific problem



❖ **product** or a **process**

- i. Goods and tools
- ii. Equipment such as production facilities and machinery
- iii. Materials such as chemical substances or textiles

- i. Manufacturing processes (work or production steps for manufacturing a product)
- ii. Control procedures (process steps for using an apparatus or machine)
- iii. Measuring methods

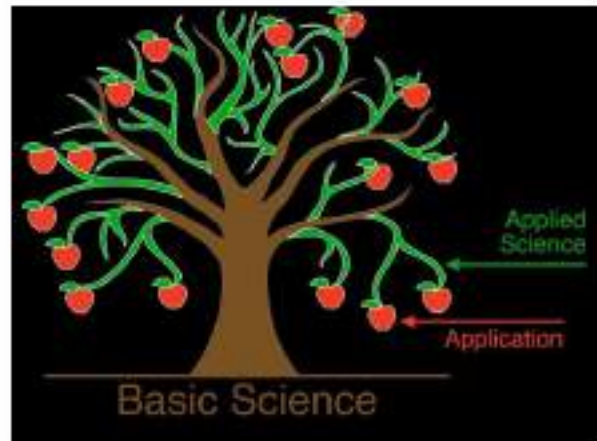
Requirements for patentability

1. The invention is new

2. The invention is inventive

3. The invention is industrially applicable

BASIC RESEARCH is the foundation for innovations



Doing research requires you embrace failure

- 1) Acceptance that research isn't for everyone and not engaging in it might be a better option.



- 2) You might be an "A" student but you may not have what it takes to do research.



- 3) Your honors degree doesn't guarantee later success in research.

4) Key attributes needed to produce a worthy research success



5) Two most common causes of hardship in research:

a) Inability to accept failure



a) Choosing a research career path for **prestige** rather than out of any **real** interest in research.

Its my hope most of you didn't end up taking the route of research our of naivety or because it's the trendy thing to do

6) If you lack a clear understanding of how research works you will end up taking the route of research our of naivety or because it's the trendy thing to do.

7) Although getting a publication, a patent or a copyright holder seems glamorous in reality it isn't.

8) **Failed** experiments and **wrong** or **risky hypothesis** are the driving forces of scientific discovery.

9) We must **embrace failure** if you are to eventually be **innovative**.

10) Research is an exceptionally challenging process that is not for everyone.

What to do when facing challenges during data collection

1. Be honest about your progress and **don't sugar coat** your data.
2. Your supervisor will be able to give you better assistance
3. You avoid making a **false impression** that will pressure you even more down the road.

Rigor drives innovativeness in research

Context
Experiments
Results
Next steps

How do you know you have patentable results?

"I didn't actually set out to find a cure for cancer – this was basic research"

James P. Allison, 2018 Nobel Prize co-winner in Physiology or Medicine

What NOT to publish before patenting

Non obviousness and Novelty Criteria

<http://www.wipo.int/pct/en/>

<http://www.wipo.int/treaties/en/registration/pct/>

Transparency disclosure when submitting manuscript for peer review

The XXX product/methods/ techniques used to develop/construct/formulate it..... were filed for a Kenya invention patent on March 2015 (Application number: 201510104936.3.

Status of application: Authorized on June 1, 2018.)

Opportunities



What can and cannot be patented? <http://www.kipi.go.ke/index.php/patents>

1. Human Necessities: Agriculture, foodstuff, to personal or domestic articles, health and affluence
2. Performing operations and transporting: separating, mixing, shaping, joining and transporting
3. Chemistry and Metallurgy
4. Textiles and paper: Road Construction: Building, earth moving mining
5. Mechanical engineering, lighting, heating, weapons, blasting including engines, pumps and engineering in general
6. Physics: Instruments and nuclear
7. Electricity

1. Discoveries or findings that are products of processes of nature where mankind has not participated in their creation (including plants and microorganisms)
2. Scientific and mathematical methods and theories
3. Schemes e.g. investment, methods of bookkeeping or insurance schemes
4. Business methods e.g. credit or stock methods
5. Rules for playing games (The games equipment may be patentable)
6. Methods for treatment of human or animal body by surgery or therapy, as well as diagnostic methods, except products, in particular substances or compositions, or apparatus for use in any of those methods or
7. Public Health related methods of use or uses of any molecule or other substances, whenever used for the prevention or treatment of any disease which the Minister responsible for matters relating to health may designate as a serious health hazard or as a life threatening disease
8. Mere presentation of information
9. Non Functional details of shape, configuration, pattern or ornamentation

Conflicts of interest may arise whenever promising novel data is obtained.

Before collaboration Please have a Research Agreement or Material Transfer Agreement

Agreement

§

Title of the Research/materials being transferred:§

§

§

Scientific Research Collaboration Agreement between:§

Dr./Mr./XXY Principal Investigator:§

University of Essex§

AR§

XXY University/Institute of Agriculture and Biosciences§

§

§

Project Name:XXXXXXXXXXXXXXXXXXXXX§

Duration of Project: November 2018 - to the end of the project.§

Sample attached with the presentation slides

Lessons learnt

James P. Allison, 2018 Nobel Prize in Physiology or Medicine

You don't set out to get a patent——Basic research gives us the opportunities to make inventive products and methods.

My journey to patenting-challenges

What challenges are you facing in project work?



Important links

- 1) <http://www.kipi.go.ke/index.php/patents>
- 2) https://files.ihub.co.ke/ihubresearch/uploads/2012/november/1352902636_819_482.pdf
- 3) <https://www.businessdailyafrica.com/analysis/Patenting-is-the-sure-way-to-harvest-fruits-of-innovation/539548-4225466-12at03g/index.html>
- 4) <http://www.wipo.int/pct/en/>
- 5) <http://www.wipo.int/treaties/en/registration/pct/>

References

- 1.) <https://www.nature.com/articles/d41586-018-06905-0>.

谢谢