

GENERIC GUIDANCE TO BOARDS OF STUDY / SPECIALTY BOARD FOR EVALUATION OF RESEARCH PROJECTS FOR MD PROGRAMMES

All PGIM trainees are expected to undertake a research project, either during pre-MD or post MD training or both. Such a study should not include case reports, but may take the form of a well-designed audit.

The time frame for submission of proposals after commencement of pre-MD or post-MD training should be specified in the relevant prospectus.

The research proposal must be submitted to the Board of Study for approval before commencing the study. **A generic format for such proposals is shown in (a).**

The proposal should be evaluated by at least one reviewer (preferably two) nominated by the Board of Study. **A generic format for reviewers to report on research proposals is shown in (b).**

The proposal should have a reasonable timeline for completion. If the proposal is unsatisfactory, the reviewers may recommend modification of the proposal or submission of a different proposal. The trainee should commence the study only after obtaining approval of the Board of Study / Speciality Board and ethical clearance.

Relevant ethics clearance, and in the case of clinical trials, registration with a Clinical Trials Registry must be obtained prior to commencement of the study.

The trainee is required to nominate a primary supervisor for the project, usually the trainee's current trainer. **Generic guidance to supervisors is provided in (c).**

The trainee must submit 6 monthly progress reports through the primary supervisor to the Board of Study. **A generic format for progress reports is shown in (d).** Feedback would be provided to the candidate as to whether the project is progressing satisfactorily.

Acceptance of the research project by the Board of Study may be based on fulfillment of either of the following:

1. Publication of the research findings as an **original full paper** (not case reports) in a **peer-reviewed journal** (preferably indexed) with the trainee as first author. No further evaluation is required on the premise that a paper which is already peer-reviewed.
2. Submission of a detailed project report to the Board of Study. **A generic format for such project reports is shown in (e).** This should be evaluated by 2 assessors nominated by the Board of Study, and marked as either satisfactory, or unsatisfactory.
 - a. If the project is considered unsatisfactory by both assessors, the trainee will be requested to revise and resubmit, with written feedback on the required revisions. If the project report is still unsatisfactory, the trainee may, at the discretion of the Board of Study, be asked to extend the same research project or undertake a new research project which will have to go through the same procedure of approval as the initial project.

- b. If there is disagreement between the two assessors, with only one assessor's decision being 'unsatisfactory', the project report should be sent to a third assessor for a final decision.
- c. Presentation of the research findings at a recognized scientific congress, either local or international, as oral or poster presentation, with a published abstract, with the trainee as first author, should be given credit during the assessment process.

The research report must be accepted prior to the completion of the study period defined in the prospectus (for example, in the case of a 2 year post MD study programme, the research project must be completed and accepted at the point when both local and overseas components of training are completed.) Once the research report is accepted by the Board of Study, the trainee should be encouraged to submit the research findings to a suitable conference or journal, if not already done.

(a) Generic format for writing a research proposal

The aim of the research component is to plan and complete a scientific research project, with due appreciation of the need for scientific validity and ethical principles, within organizational and financial constraints. The choice of the research project will be primarily that of the trainee, but this should be discussed with and approved by the supervisor. The trainee should prepare a research proposal which will be submitted to the Board of Study for approval prior to commencement of the study.

Time frame: the research proposal should be approved within the time period stipulated by the Board of study.

Format:

In general, the research proposal should be limited to 3000 words. The following structure is suggested:

- Title of the study
- List of investigators
- Collaborating institutions
- Background/introduction: this should include an overview of the subject related to the research project, with a relevant review of the literature.
- Justification: This section should provide a brief justification of the importance and relevance of the study proposed, including the feasibility of the study.
- Objectives: general and specific objectives of the study should be clearly defined.
- Methods: The methodology to be adopted to achieve the listed objectives should be given in detail; the following sub-sections are suggested as a guide:
 - i. Study design
 - ii. Study period
 - iii. Study population
 - iv. Sample size calculation
 - v. Sampling technique
 - vi. Study instruments
 - vii. Data collection

- viii. Proposed statistically analysis
- ix. Ethic clearance and consent, and confidentiality of data
- x. Proposed methods for dissemination of findings

- Annexes: the following annexes should be provided:
 - i. Data proforma/s
 - ii. Consent forms, where relevant in all three languages
 - iii. Other relevant supporting documents

The trainees are advised to use Microsoft Word® for formatting documents. The software Endnote®, Reference Manager® or Mendelay® should be used, if possible, for citations. The reference format should follow the Vancouver® Style.

Both soft and hard copies of the documents should be submitted to the Board of Study, through the supervisor.

(b) Generic format for reviewers to report on research proposals

The reviewers of the research project should rate the research proposal as satisfactory or unsatisfactory. The main sections should be rated as satisfactory or unsatisfactory, and, if rated as unsatisfactory, specific comments should be provided. General statements should be avoided, and the reviewers should specifically what deficiencies are present and how they could be addressed.

Section	Satisfactory or Unsatisfactory	Remarks
Background		
Justification		
Objectives		
Methods		
Overall		

Recommendation: Accept as is / Revise and resubmit / reject

If a proposal is rejected altogether, the trainee will be expected to submit a new proposal.

(c) Generic guidance to supervisors

1. The supervisor should guide the student in planning, carrying out research methodology and in presentation of the work, including the writing of the dissertation.
2. The supervisor should obtain recommendation of the research proposal from a reviewer.
3. The supervisor should forward progress report(s) in the prescribed form at the end of 3 months after the trainee commences work on the research project and 3 months after completing the project work.

4. The objective of the dissertation is to prove the trainee's capability to plan, carry out and present his/her own research. The purpose of this training is to ensure maturity, discipline and scholarship in research.
5. The dissertation should comprise the trainee's own account of his / her research.
6. It should be satisfactory as regards literary presentation.
7. The dissertation should be certified by the supervisor as suitable for submission.
8. General Comments on the contents: The objectives should be clearly stated and should be feasible to achieve within the time frame. Other published work relevant to the problem (both international and local) should be comprehensively covered and critically evaluated. The research methodology should achieve the objectives stated. The results should be presented effectively. The discussion should include comments on the significance of results, how they agree or differ from published work and theoretical / practical applications of the results, if any. The conclusions should be valid and be based on the results obtained on the study.
9. Ethics: The candidate should confirm and document that procedures followed were approved by the Ethical Committee of the institution where the work was carried out and ethical approval is obtained by a recognized Ethical Committee.
10. If at any time the supervisor is not satisfied with the work progress of the trainee, the trainee should be made aware of the deficiencies and corrective measures suggested. This should be conveyed in writing to the trainee with a copy to the Board of Study. In such instances, a follow-up report should be forwarded within three months or earlier if necessary to the Board of Study.

(d) Generic format for progress reports

The progress reports should have the following components:

- By the trainee: Description of work carried out to date
- By the supervisor:
 - i. Whether the research project is progressing satisfactorily
 - ii. Constraints
 - iii. Whether the dissertation writing is on schedule
 - iv. Whether overall progress is satisfactory

(e) Generic format for project reports / dissertations

The following format should be adopted for project reports or dissertations

The preliminaries should precede the text. They should comprise the following:

1. Title page
<Title of dissertation>

<Author's name>

MD (subject)

Post Graduate Institute of Medicine

University of Colombo

<Year of submission>

2. Statement of originality:

This is a declaration that the work presented in the dissertation is the candidate's own, and that no part of the dissertation has been submitted earlier or concurrently for any other degree. The statement should be signed by the author, and countersigned by the supervisor.

3. Abstract:

This should consist of a brief summary of not more than 350 words describing the objectives of the work, the materials and methods used, the results obtained, and the conclusions drawn. This may be in a structured format if helpful.

4. Table of contents:

The table of contents immediately follows the abstract and lists in sequence, with page numbers, all relevant divisions of the dissertation, including the preliminary pages.

5. List of tables:

This lists the tables in the order in which they occur in the text, with the page numbers.

6. List of figures:

This lists all illustrative material (maps, figures, graphs, photographs etc) in the order in which they occur in the text, with the page numbers.

7. Acknowledgments

Text

The dissertation should be divided into clearly defined sections. Sections may be subdivided.

Introduction:

The aim of this section is to state briefly the current position and the reasons for carrying out the present work. Generally, only a few references should be cited here.

Literature Review:

This section should be reasonably comprehensive, and most of the references to be quoted normally occur here. The relevant references dealing with the general problems should be reviewed first and this is followed by a detailed review of the specific problem. The review is in many cases approached as a historical record of the development of knowledge of the subject. This chapter should conclude with a brief statement of what you propose to find out.

Materials and Methods:

These should be described so that a reader could repeat all the experiments. Where specific details are available in the literature, reference should be made to the original papers, and comments kept to a

minimum. If modifications have been made to the published techniques, these should be described in full.

Results:

Much of the data should be given in tables and figures and these should be inserted in the text at the appropriate place. The results must be fully described in the text. It is not sufficient to merely present the tables and figures without any comment. The tables and figures should be clear without references to the text, and this requires concise explanations in legends. Where possible, data presented in the text should have already been analyzed and the complete 'raw' figures should not be included in this section but should be contained in tables in the Appendix.

Only data from the present work should be included in this section and in particular no comparison should be made at this stage with results from other workers.

Discussion:

The discussion is the most difficult part of the dissertation to write because the author has to compare **critically** the present results with those of other workers and to draw valid conclusions from these studies. Descriptions of other workers findings which already appear in the Literature Review should not be repeated in the Discussion. Instead, refer to the Review.

The limitations of the study and recommendations for future research on the subject should also be included in this chapter.

As your project proceeds, keep notes of your thoughts and discussions relevant to this section.

References

All references should be cited in the text. The Vancouver style should be used for references, and should be listed in the order of citation. Endnote ®, Reference Manager® or Mendelay® referencing software should be used for citations.