

**POST GRADUATION DIPLOMA IN
MATERIALS MANAGEMENT**

DISSERTATION (PAPER-19)

GUIDELINES FOR STUDENTS



Indian Institute of Materials Management

NATIONAL HEADQUARTERS (EDUCATION WING)

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SELECTION OF A GUIDE

The student has to ascertain that a guide is available for his / her dissertation. A guide is usually an experienced professional who has several research problems to his mind. His experience will enable a student to proceed on the right track. The guide puts forth the problem in general terms and it is up to the student to narrow down the problem to operational terms. The guide can preferably be a senior member of the organization where the student is employed.

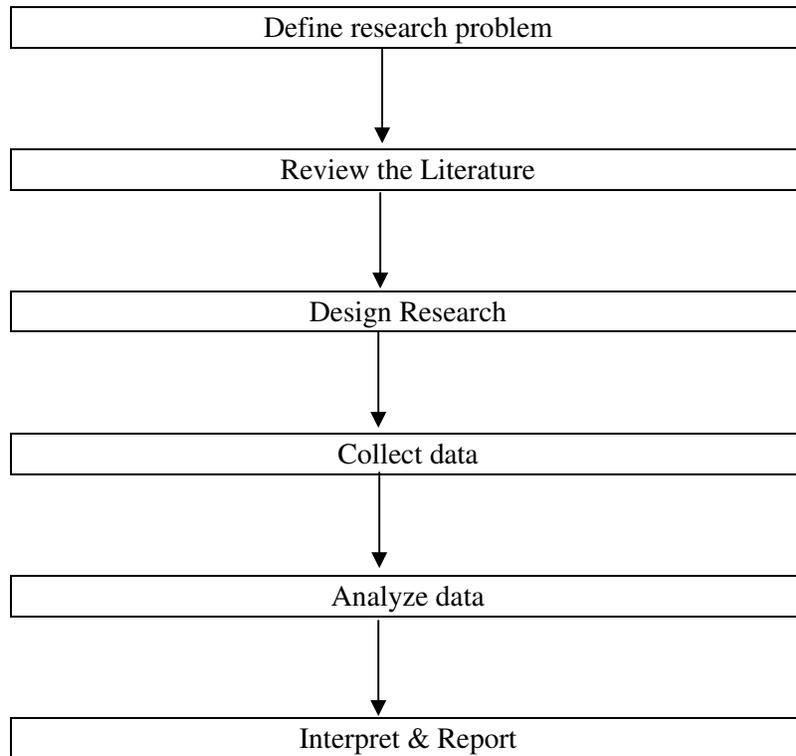
A set of guidelines for the Dissertation is given to the guide to ensure that the student abides by the format or the Dissertation structure laid down by the institution.

A certificate from the guide along with his signature should be submitted along with the Dissertation. (See Appendix II)
No Dissertation will be accepted if it has not enclosed Guide's certificate.

SYNOPSIS:

A Synopsis is an outline of what the intending dissertation is about. It represents the dissertation in a nutshell without any illustrations and explanations. It serves as a guideline for the ensuing research. It should contain the following elements. (Flow chart fig 1).

RESEARCH PROCESS IN FLOW CHART



The synopsis should be brief-Not more than 2 to 3 pages. Synopsis for approval must be submitted in the structured format given below:

Item	Particulars	Remarks
Name of Student		
Roll no. of student		
Address for correspondence Telephone E-mail		
Name of Guide Designation Address		
Proposed title of project		
Problem under study		
Scope		
Brief background		
Methodology		
Conclusion/ Recommendations		
Approved/Not approved		
Comments/Suggestions		
4		

**POST GRADUATION DIPLOMA IN MATERIALS
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GUIDELINES FOR STUDENTS

The students are required to take up a Dissertation of six months duration in the VIth Semester of the PGDMM Course. This forms a part of the curriculum and is a pre-requisite for the successful completion of the course.

1.1 WHAT IS A RESEARCH DISSERTATION ?

Research is simply a systematic and refined technique of thinking. Employing special tools, instruments and procedures in order to obtain a more adequate solution of a problem than would be possible under ordinary means". It starts with a problem, collects data or facts, analyses these on the actual evidence. It involves original work and production of new knowledge.

Research can be descriptive or explanatory. In a descriptive study we study the existing systems / prevailing conditions of the topic under Research. In exploratory study we explore the area of study, by introducing new arguments to the existing system and draw inferences and projections that were hitherto unknown.

1.2 WHAT CAN BE STUDIED IN A DISSERTATION? The dissertation taken up for study can be any subject related to Materials Management. It can be a direct relation or applied one like ISO 9000 in MM etc. . The dissertation should preferably be conducted in the organization where the student is employed. The following suggest what a Dissertation can be all about :

- 1) A new perspective or new knowledge must be forthcoming.
- 2) Dissertation can be a review of existing literature bringing out new trends.
- 3) Can be company specific or Industry specific.
- 4) Dissertation can be either specific to a situation in a Company or dept, & in essence a practical solution to a problem.
- 5) Dissertation can be an in depth extension of the Project work. (Done in Semester iv).

CRITERIA OF A GOOD DISSERTATION

1. The purpose of the research should be clearly defined and common concepts be used to convey the matter in the simplest possible manner.
2. The research procedure should be described in sufficient detail to permit another researcher to extend the research further.
3. Analysis of data should be sufficiently adequate to reveal its significance. The methods of analysis used should be appropriate.
4. Conclusions should be confined to those justified by the data of the research and limited to those for which the data provide an adequate basis.
5. Flaws in procedural design should be reported and their effects on the findings be estimated.
6. The dissertation should show originality and should necessarily be an attempt to solve some / problem. It must contribute to the solution of a problem and must add to the store of knowledge.

SUGGESTED AREAS OF STUDY:

The list in Appendix is illustrative.

(A) BRIEF BACKGROUND ABOUT THE ORGANISATION

Information about the organization where the study is proposed to be conducted should be cited. Details like the name, location, what the company manufactures, and other necessary information can be highlighted. Confidential matters need not be mentioned. If you do not want to name the company, XYZ name can be given.

(B) PROBLEM UNDER STUDY:

Before embarking on the Dissertation, the problem to be studied must be identified. The following questions should be kept in mind while formulating a problem. Is it novel? Is the necessary data available to do the dissertation?

SOURCES OF THE PROBLEM

1. Problem of research may be seen in the conflicts experienced by one who is performing a particular work/job etc.
2. Areas of research may be suggested in reports, journals, papers, books etc.
3. Already completed research work
4. Developing idea through discussion.

The research problem undertaken for study must be carefully selected. It is important to keep the following points in mind when selecting a problem.

- a) Subject which is over studied should not be chosen.
- b) Too narrow or too vague problems should be avoided.

- c) Subject selected for research should be familiar and feasible so that the related research material or sources of research are within one's reach.
- d) Controversial subject should not become the choice of an average researcher.

(C) REVIEW OF LITERATURE:

Do you have access to the materials date references of the study done so far? It is vital for a student to examine all the available literature, to get him acquainted with the selected problem. Review may be of two types: **CONCEPTUAL LITERATURE** – concerning the concepts & theories, **EMPIRICAL LITERATURE** – consisting of studies made earlier which are similar to the one proposed. The review of literature will give a comprehensive view to the student as to which area of study is found wanting of there is a lacuna. It gives the knowledge as to what data and as to what data materials are available for operational purposes which will enable the researcher to specify his own research problem in a meaningful context. This enables the student to select the area of study that is most recent and has the most application value to his organization. A further extensive review can be done by leading periodicals and recent publications in materials management.

(D) SCOPE OF THE STUDY

How valuable is the study done by you? Will it add to the present body of knowledge? Does it have application value can it be used for improvement by the organization in the field of Materials management. Are the results that may be obtained be of practical value to your organization. The study done should be an original one and not duplicated from a previous study.

METHODOLOGY

DATA COLLECTION:

- i) How and where will the study be conducted /
- ii) What type of data will be collected? Is it primary or secondary? Primary data is collected through observation i.e by experiment. It is collected afresh and for the first time and thus happens to be original in character. Secondary data is that which has already been collected by someone else and which have already been passed through the statistical process. It can be collected from from records of the organization like balance sheets. Control figures, performance reports, Sales reports etc. it is important to scrutinize the secondary data collected for your study as it may be inadequate or unsuitable in the context of your problem. Face value of the published figures should not be safely taken as data collected.
- iii) What technique of data collection is being used? This depends largely on
 - a) Nature of the problem / enquiry
 - b) Time factor
 - c) Precision
 - d) Availability of funds

The technique of data collection may be through Interview, Observation, Questionnaire, Survey, Schedules etc. A combination of data collection techniques can be used eg. Interview & Secondary data collection.

- iv) Where will the data be collected? From the organization where the study is being conducted or external reports etc.

DATA ANALYSIS

The analysis to be done will depend on the type of data collected. The data collected has to be represented in the form of tables, graphs, pie charts, flow charts after it is classified and coded. If a great deal of data is gathered, the help of computers can be used. Analysis of data can be either Quantitative or Qualitative

QUANTITATIVE ANALYSIS:

The data gathered is quantified in terms of numerical or figures and suitable statistical analysis is done. Quantified data is more reliable and precise than qualitative data.

QUALITATIVE ANALYSIS: is done on data collection from marketing research product development etc. It mainly consists of subjective inputs and rarely uses precise numerical description.

(F) CONCLUSIONS & RECOMMENDATIONS:

What conclusions can be expected from the study? They should be based on the facts of the study. What general formulation of principles can be deduced from the study? Can company specific or industry specific norms be derived from the study?

SUBMISSION OF SYNOPSIS:

Before embarking on the actual study, it is mandatory to submit a SYNOPSIS of the intending study for approval.

It should be sent to the Director of Education, NHQ Education wing, Navi Mumbai. On scrutiny the synopsis will be returned to the student. If the synopsis is approved, the student will be permitted to proceed with the Dissertation. The synopsis should be accompanied by the name & address of the guide.

SYNOPSIS APPROVAL:

A student's synopsis can be disapproved on one or more of the following grounds:

- a) The format specified in the guidelines is not followed.
- b) Synopsis being very sketchy i.e. insufficient information etc.
- c) Unclear objectives of the study
- d) Methodology inappropriate to subject
- e) Repetition of work done for project
- f) Study not comprehensive and unlikely to relate to generalized conclusions.
- g) More theoretical in nature lacks practical utility.

Students have to submit a well prepared synopsis, as a non approval of synopsis is indicative that a good dissertation is not in the offing. Students are advised to carefully go through the guidelines before submission of the synopsis. A non-approval may be considered as a serious rejection.

In case of non-approval the student is advised to re-submit the synopsis with the revisions based on the reasons of disapproval. The student has the option of re-submitting the synopsis or submits a fresh synopsis on a different topic.

EXECUTION OF THE STUDY

The execution of the project is a very important step in research process. The student should ensure that the Dissertation is executed in a systematic manner. After the necessary approval of the synopsis the student can embark on the actual study. If the data is of primary nature, then the data collection be of prime concern. Students should ensure that data collection be done at

the earliest and the necessary statistical analysis done, as the crux of the dissertation lies on the data collected.

It is important that the student keep the guide informed about the progress at each stage of the Dissertation. Any shortfalls or problems must be rectified at this stage or else the purpose of the dissertation stands questioned. Each chapter completed by the student should be given to the guide for approval before final draft is made. Likewise all the chapters of the project need to be scrutinized by the guide. Student may have to write and re-write the specific chapters till it is pruned to be final.

STRUCTURE OF THE DISSERTATION REPORT

A) **INTRODUCTION:** Of the topic under study. An orientation to the area, highlighting the important aspects and salient features. It should cover the topic at length. Eg. If it is a study on ISO 9000 in materials management a detailed note on what is ISO 9000, its implications and significance. Its impact on Indian environment. How can any organization acquire ISO 9000 certification. Its relevance in MM. Value addition due to ISO 9000.

B) **BACKGROUND OF THE COMPANY:** The name of the company. Location organizational details its production organizational structure, technical background existing systems and other information related to the particular subject under study. A brief write up of the problem you want to study in that organization.

E) **LIMITATIONS OF THE STUDY:** if any should be highlighted. This can help scrutiny of the dissertation. It also serves as a basis of improvement for a future work on this topic of study.

STEPS IN WRITING THE DISSERTATION

- 1) **LOGICAL ANALYSIS OF THE SUBJECT MATTER:**
This is primarily concerned with the development of the subject matter. There should be a basic connection or sequence in the structuring of the dissertation. Information should follow the funnel shape. The broader aspects be discussed than narrowing down the discussion to specific topics.
- 2) **PREPARATION OF THE OUTLINE:** They are the framework upon which long written works are built. They are an aid to the logical organization of the material to be contained in the dissertation report.
- 3) **PREPARATION OF THE ROUGH DRAFT:** This is where the student sits down to write what he has done in the context of his study. He will write down the procedure of collecting the material for his study, the techniques for analysis, the findings, conclusions and suggestions.
- 4) **REWRITING & POLISHING OF THE ROUGH DRAFT:** This step requires _____ rewriting the rough draft. In this phase, one should check for the weaknesses in _____ development or presentation. The student should check whether or not the various topics presented have unity & cohesion and whether it exhibits ad definite pattern. One should check the mechanics of writing – grammar, spelling and usage. Final fair copy should be made for approval of the guide.
- 5) **PREPARATION OF BIBLIOGRAPHY:** The bibliography which is generally appended to the research report is a list of books in same way pertinent to the dissertation done. It should include all the works which the student has consulted.

The bibliography should be arranged alphabetically and may be divided into two parts: first part may contain the names of book and second part may contain the names of magazine & newspaper articles. It should follow the

- 1) Name of the author, last name first
 - 2) Title of the article, book in quotation marks
 - 3) Place publisher and date of publication
 - 4) Number of volumes
- 6) **WRITING THE FINAL DRAFT:** The final draft should be written in a concise and appropriate style and in simple language. Illustrations if any should be incorporated.

OTHER DETAILS TO BE CONTAINED IN THE REPORT

(The below mentioned aspects should be contained in the dissertation report Bibliography must be contained at the end of the dissertation).

- 1) **ACKNOWLEDGEMENT:** is one of courtesy. In it the investigator acknowledges the guidance and assistance he has received in the development of the study.
- 2) **CERTIFICATE FROM THE GUIDE :** (See appendix II)
- 3) **ABSTRACT OF THE STUDY:** Must follow after Certificate. Abstract is an abridged version of the actual completed study it is a concentrated form of what the dissertation is about. It should not be more than 250 words or 20 lines. The abstract must be double spaced.

PHYSICAL FORMAT OF THE DISSERTATION

a) The front cover should contain the following details:

TOP: The title of the Dissertation in block capitals, properly centered.

CENTRE: Full Name of the candidate in block letters with the Roll no.

BOTTOM: Name of the Institute. Year of submission.

b) **BLANK SHEETS:** At the beginning and at the end of the dissertation, two blank sheets of paper shall be provided : One for the purpose of binding and another left blank.

c) **TITLE SHEET:** The title sheet shall be the first typed sheet and shall follow immediately after the blank sheet.

d) **PAPER:** The Dissertation shall be typed on white quarto bond paper.

e) **TYPING:** The typing shall be in standard letter size, one and a half or double spaced on one side of the paper only.

f) **MARGIN:** The typed sheets should have the following margins : Left 35mm, Right 20mm, top 35mm, Bottom 20mm.

g) **PAGE NUMBER:** Should be centrally located in roman numbers at 15mm from the bottom of the page centrally located.

h) **BINDING:** The dissertation shall be Rexene bound in black.

COPIES TO BE SUBMITTED

The candidate is required to submit 1 copy of the Dissertation along with soft copy on compact Disc (CD) to the NHQ Education wing. One copy of the Dissertation must be sent to the branch where the viva will be conducted, only after the viva letter is received by the student. A copy of the dissertation must be carried for the viva test.

VALUATION OF DISSERTATION & VIVA VOCE:

The submitted project report will be sent for evaluation. The Dissertation will be evaluated on the following criteria.

CRITERIA	MAX. MARKS
1. Specific and Innovative objectives	30
2. Review of Literature relevant to specific objectives	30
3. Methods of data collection	40
4. Analysis of data, findings & comparisons	60
5. New knowledge or new perspective	40
6. Innovative techniques / approach to the problem scheme	40
7. Summery & Conclusions drawn with reference to specific objectives	60
8. Recommendations, and limitations of the dissertation	40
9. Dissertation presentation	60
	<hr/>
	<u>400</u>

If the Dissertation is approved by the evaluator, the candidate will be eligible to appear for the Viva voce exam. If the dissertation is not up to acceptable standards, the dissertation will be rejected and the student has to re-submit the project

based on the remarks of the evaluator or even submit a dissertation on a fresh topic if he so desires. In which case the student has to get the synopsis approved. The dissertation can be rejected due to the following reasons:

- a) It is not original in nature.
- b) Insufficient representation of data, lacuna in the discussion and analysis.
- c) No relation between the problem studied and the methodology at hand i.e. design, insufficient subject matter.
- d) Shoddy presentation of the dissertation, i.e. grammatical errors, presentation etc.
- e) Repetition of Project work
- f) Analysis of data very shallow, not quantified, just mere representation.
- g) Irrelevant information, not related to the subject under study
- h) Copying from other works
- i) Any other reasons which are subjective depending on the presentation and the examiner

VIVA – VOCE

- A) Candidate is eligible for the Viva-Voce exam only if his dissertation is passed by the evaluator. If he is successful he can take up the Viva exam at the branch he is attached to The Viva exam will be based on the Dissertation prepared. The exam is in support of the dissertation, wherein the panel of examiners may try to assess aspects like.
- a) Knowledge of the student in the subject matter of the dissertation
 - b) Scope of the study

- c) Details regarding the actual study, like data collected, the analysis etc.
- d) Application value, value addition and other related aspects of your dissertation

If a student is not successful in the Viva Voce exam, then the dissertation will have to be re-written or fresh one done depending on the evaluator's comments

MARKS FOR THE DISSERTATION

The Dissertation will carry 400 marks and the Viva Voce 100 marks. The minimum for passing will be 50% for both the Dissertation and Viva –Voce.

APPENDIX I

ILLUSTRATIVE LIST OF TOPICS FOR DISSERTATION

- 1) Scrap Management
- 2) Lead Time Analysis
- 3) ISO 9000 in MM
- 4) Quality Control /TQM
- 5) Inventory Control Systems
- 6) Purchase Procedures & Systems / Policies
- 7) Vendor Rating
- 8) Spare Parts Management
- 9) Cost Control / Reduction
- 10) Planning and Procurement of Raw Materials
- 11) Wastage Control
- 12) Material Handling Equipment
- 13) Systems Integration and Logistics
- 14) Codification and Computerization in MRP Inventory
- 15) Material Requirement Planning
- 16) Vendor Development
- 17) Waste Disposal
- 18) Ancillary Development

- 19) Safety Evaluation for Material Loss
- 20) Sub- Contracting Systems
- 21) Computer Applications Systems
- 22) Value Analysis
- 23) Value Engineering
- 24) Import/Export Systems
- 25) MRP II
- 26) Claims Management
- 27) Warehouse Planning
- 28) Inspection Techniques and MM
- 29) Indenting Systems
- 30) Accounting Systems in Stock Control
- 31) Application of Modern Scientific MM
- 32) Application of Quantitative Techniques
- 33) Budgetary impact on MM
- 34) Storage and Preservation Procedure
- 35) Make or Buy Decision
- 36) Clearance of Imported Cargo
- 37) Project Buying
- 38) Stock Control
- 39) Store Keeping
- 40) Strategic Alliances in Purchasing
- 41) Buyer-Seller relations
- 42) Green Buying Practices in MM
- 43) Ethical Practices in MM
- 44) Corporate Planning
- 45) Long Range of R&D Strategy for Technology Based Industries
- 46) World Class Manufacturing
- 47) Quality management in Advanced Manufacturing Systems
- 48) Role of HRM in MM
- 49) Packaging Economics

APPENDIX II

CERTIFICATE FROM THE GUIDE

This is to certify that the Dissertation works titled.....

.....
is a bonafide work carried out by

.....
.....Roll No.....

a candidate for the Post Graduate Diploma in Materials
Management Examination of the Indian Institute of Materials
Management under my guidance and direction.

SIGNATURE OF GUIDE

NAME:

DESIGNATION:

ADDRESS:

DATE:

PLACE: