

A decorative graphic on the right side of the page. It features three overlapping circles of varying sizes and shades of gray. A horizontal yellow bar is positioned above the top circle. Two thin blue lines intersect at the top left and extend diagonally across the page, one passing through the top circle and the other passing through the middle circle. A large, partially visible circle is at the bottom right.

# **[M. Phil. Physical Education]**

[A Proposal]

[This document carries the detail rules and regulation, the content and the evaluation method for the Degree of M. Phil Physical Education, University of Pune.]

**University of Pune**  
**Rules for the Degree of Master of Philosophy (M. Phil.)**

**1. Status:**

The M. Phil. Degree shall have the status of an intermediate Degree between the first Post-Graduate Degree and the Doctorate Degree. It will have both research and course components and will give the student adequate background for advanced research.

**2. Eligibility and Admission:**

Second class Master's Degree in relevant subject

Admission to the M. Phil. Course shall be made on the basis of:

Satisfactory performance at the Master's Degree Examination and the performance at a test conducted by the Department/College concerned.

Admission to the M. Phil. Course shall be made at the beginning of either the 1<sup>st</sup> term or the 2<sup>nd</sup> term depending upon the convenience of the concerned Department/College.

**3. Duration of the Course:**

The M. Phil. Course can be done either on a full-time or on a Vacational basis depending upon the availability of the programme in the Department/College.

*(a) Full-time Course:*

The duration of the full-time M. Phil Course shall be 12 months. If an M. Phil student is unable to complete his dissertation within this period, he will be allowed to do so within an additional period of one year.

*(b) Vacational Course:*

The vacational M. Phil. course shall extend over a period of 24 months. Such vacational M. Phil. student shall have to devote a minimum period of 4 months for his studies at the M. Phil. Centre of his registration. Like a regular student, a vacational student also may be permitted to complete his dissertation within the additional period of one year.

The facility of vacational M. Phil. course shall be restricted to full-time teachers of Colleges/Universities and full-time research workers of the Recognized Institutions within the jurisdiction of the University of Pune and other than Pune University they will have to submit a certificate of their employer to that effect along with the application for admission.

**4. The criteria for granting admission to the Vacational M. Phil programme in all the faculties will be as follows:**

(a) Top preference will be given to the Senior College lectures working in Pune University colleges who need M. Phil degree in order to earn their further increments.

(b) Second preference to Senior College lectures working in Pune University colleges who do not need M. Phil degree but want to improve their qualification.

(c) Third preference to Junior College lectures working in Pune University colleges.

(d) Senior College lectures working in colleges affiliated to Universities other than Pune University who need M. Phil degree for earning their increments.

(e) Senior College lectures working in colleges affiliated to Universities other than Pune University who do not need M. Phil degree but want to improve their qualification.

(f) Junior College lectures working outside Pune University area. The Admissions under the above categories will be given only on the basis of merit in each category and only when after filling the seats in the higher categories seats are vacant that the vacant seats be filled in by candidates from the lower categories.

**5. The maximum period of registration for M. Phil Course:**

The maximum period of registration for M. Phil student shall be 3 (three) years and four years for vacational student after which the registration shall stand cancelled. If a candidates dissertation is ready after the completion of 3 years period he/she may allowed to submit his/her dissertation within the six months by registering his/her name a fresh by paying the normal tuition fees due for one year for fresh registration.

However, such a candidate shall be exempted from doing the M. Phil course work. If a candidate fails to submit his/her dissertation after re-registration, he/she allowed to submit his/her dissertation by paying Rs. 200/- for every six months i.e. up to 5 years. After this the re-registration stands as cancelled.

#### **6. Content:**

The M. Phil course programme shall consist of:

- (a) Three course on advanced topics, including Research Methodology.
- (b) A dissertation based on the project work assigned to an individual student.

#### **7. Administration of M. Phil Programme:**

The M. Phil Programme shall be administrated at each M. Phil Centre by an M. Phil Committee

##### *(a) Constitution of the M. Phil Committee*

- (i) On the recommendation of the Departmental Committee in University Department of the Principal of the College (where the M. Phil Centre is located) the BUTR in the Faculty concerned shall appoint the M. Phil Committee and its Chairman.
- (ii) The M. Phil Committee shall consist of not less than three and not more than six research guides in the subject. The tenure of the committee shall be of two years.
- (iii) The members of the Committee shall be so chosen as would give representation to all or maximum number of specialization in the Department.

##### *(b) Powers and duties of the M. Phil Committee:*

The M. Phil Committee shall function under the general control and guidance of the Department Committee of the University Department/Principal of the College and shall have following powers and duties:

To make admission to the M. Phil Course

- (ii) To recommend to the Academic Council through the BUTR the syllabi for the courses.
- (iii) To assign student to project guides and dissertation supervisors before the end of the first term for full-time student and before the end of one year for vocational student of the M. Phil programme
- (iv) To assign courses to teachers of the Department/College
- (v) To assign various courses to different student.
- (vi) To make arrangements for evaluating the performance of the student at the Seminar/Course Work/Dissertation.
- (vii) To organize Seminars, Tutorials, Group Discussions etc.
- (viii) To prepare Semester wise time-table for regular student.
- (ix) To prepare the guidance programme for Vocational student.
- (x) To recommend to the Vice-Chancellor through the Departmental Committee concerned for extension of the period of the M. Phil registration.
- (xi) To recommend to the Departmental Committee, Principal of the College the removal of the name of a student from the roll on account of unsatisfactory performance or in disciplinary behavior.
- (xii) To prepare an exhaustive panel of referees by taking into consideration the requirements of the specialization for submission to the Academic Council through the Board of Studies in the subject concerned for its approval.
- (xiii) To recommend to the Vice-Chancellor for his acceptance at least three names of examiners in order of preference from the panel approved by the Academic Council.
- (xiv) To process invitation to dissertation examiners, get reports from them arrange viva-voce examination of the student and finalise the result and forward the same to the University authorities through the Departmental Committee concerned for declaration.

#### **8. Terms:**

- (a) For full-time student the duration of the M. Phil course shall be two terms of six months each.
- (b) A full-time M. Phil student shall attend lectures, tutorials, practical and seminars and must complete to the satisfaction of the M. Phil Committee the assignment prescribed for the course.

(c) A Vacational student must stay at the M. Phil centre for at least two months in a year and must attend lectures, tutorials, practical and seminars must complete to the satisfaction of the M. Phil Committee the assignments prescribed for the course.

**9. Evaluation:**

(a) The evaluation of the candidate’s course work and his performance at the seminars will be a continuous process.

(b) The evaluation of the performance of the student in the M. Phil course shall be done by the course in-charge.

(c) The dissertation will be evaluated by the guide of the candidate and an external referee appointed by the University authorities on the recommendation of the M. Phil Committee.

(d) The evaluation of the final seminar and the viva-voce test will be done by a committee consisting of the following:

(i) A research guide to be nominated by the Head/Professor-in-charge of the University Department/Dean of the Faculty concerned from a panel of three senior research guides to be suggested by the dissertation Supervisor- Chairman.

(ii) The dissertation supervisor.

(iii) A number of the M. Phil Committee to be appointed by the M. Phil Committee

(e) The evaluation of candidates for the M. Phil degree shall be done according to the following grading system:

Letter	Grade	Quality	Grade Points Equivalent Numerical Scale (Out of 100)
O	Outstanding	6	75-100
A	Very Good	5	60-74
B	Good	4	50-59
C	Average	3	43-49
D	Below Average	2	35-42
E	Poor	1	25-34
F	Fail	0	0-24

The Examiners will award only the Letter Grades:

(f) The performance of the candidates will be evaluated under the following Heads of Passing. The weightage given to each Head of Passing and the maximum final grade-points are as below:

Head of Passing	weightage Factor	Maximum Final Grade Points
<b>Group I</b>		
Course 1	2	12
Course 2	2	12
Course 3	2	12
<b>Group II</b>		
Dissertation	4	24
*Seminar	1	06
Viva-Voce	1	06
		72

\* Seminar and Viva-Voce will be based on the dissertation.

(g) Evaluator of the various Heads of Passing will give letter-grades for each Head.

The Grade-points corresponding to these letter-grades will be multiple by the weightage factor to obtain the total final grade-points for that Head.

(h) Minimum final Grade points for Passing: To pass, a candidate should get the following minimum final grade-points:

	<b>Minimum Final Grade Points</b>
Total	36
Group I	16
Group II	18
Course 1	4
Course 2	4
Course 3	4
Dissertation	12
Seminar	3
Viva-voce	3

(i) In the case of Dissertation the average of the total final grade-points given both by the internal and the external referee shall be taken as the final score. If either of the referees awards a letter-grade D, E or F to a dissertation, the candidate will be declared to have failed in the dissertation. He may resubmit the dissertation after suitable modification within a period of one year from the declaration of the first result. Only one resubmission of the dissertation is allowed.

(j) If the candidate has secured minimum final grade points in all the Heads of Passing, then the final seminar and the viva-voce test will be arranged. All interested persons can attend the seminar and the viva-voce test, which will constitute the defense of the dissertation, and they shall have the right to ask questions and participate in discussion on dissertation. The Chairman appointed in the manner prescribed above will exercise his discretion to all or not to allow a question. However, the members of the audience at the defense shall have no right to express their opinion on the suitability or otherwise on the dissertation for the award of the M. Phil Degree.

(k) In the case of course work, a student who does not get the minimum final grade point (i.e. 4) will have to reappear for the examination in that course.

(l) A student will have to give another seminar if he does not get the minimum grade-point (i.e.3) in the seminar.

(m) A student will have to reappear for viva-voce if he does not get the minimum grade-point (i.e.3) in the viva-voce. A student can repeat the seminar and viva-voce only once.

(n) Overall Grades: A candidate who is declared as passed, will be placed in Grade

“O”, “A”, or “B” depending upon the total final grade-points he secures according to the following table:

Overall Grade	Total Final Grade Points out of 72
“O” (Outstanding)	64 to 72
“A”	50 to 63
“B”	36 to 49

A candidate securing fewer than 36 final Grade-Points will be declared “Failed”.

#### **10. Final Transcript:**

(a) The Chairman of the M. Phil Committee shall submit through the Departmental Committee to the University a final transcript in duplicate of the student in the separate prescribed proforma along with viva-voce report and external Referee’s detailed report.

(b) The evaluation of the performance of the M. Phil Candidate in the course work, seminars, viva-voce test, dissertation shall be sent separately in the prescribed proforma.

#### **11. Disposal of the copies of Dissertation:**

After the result are declared, out of three copies of the dissertation submitted by the student, one will be returned to the student, one will be retained by the Department and one will be given to the dissertation supervisor.

**12. Academic staff and organization:**

For the introduction of the M. Phil course a centre shall have at least six teachers who are recognized Ph.D. guides, out of whom at least three shall be on its own staff and three teachers who can be actively associated with the conduct of the M. Phil programme at the centre may be contributed. For the introduction of the M. Phil course in a College prior concurrence of the U.G.C. shall be necessary.

**(A) Preamble**

M. Phil (Physical Education) student are required to give three papers consisting of coursework and a Dissertation to be completed under the guidance of supervisor/guide appointed by the Research Centre. The details are as follows

Course I	Research in Physical Education
Course II	Statistical Procedure for Research in Physical Education
Course III	3.1 Test, Measurement & Evaluation Process 3.2 Open Course
Course IV	Seminars
Course V	Dissertation
Course VI	Viva Voce

**(B) Outline of the Course**

An outline of the course I to VI and guidelines for dissertation are given below;

**M. Phil (Physical Education) Syllabus Frame work**

Group	Course	Title	Max Marks	Weightage factor	Max Grade Points	Min Grade Points for Passing
I	1	Research in Physical Education	100	2	12	4
	2	Statistical Procedure for Research in Physical Education	100	2	12	4
	3	3.1 Test, Measurement & Evaluation Process	50	2	12	4
		3.2 Open Course	50			
<b>Total of Group I</b>			<b>300</b>	<b>6</b>	<b>36</b>	<b>16</b>
II	4	<b>Seminar</b> a. Proposal Presentation (25 Marks) b. Review of Related Literature & Research Procedure (25 Marks) c. Data Collection Tools & its reliability (25 Marks) d. Data Analysis its interpretation & conclusions (25 Marks)	100	1	6	3
	5	<b>Dissertation</b>	200	4	24	12
	6	<b>Viva-voce</b>	100	1	6	3
	<b>Total of Group II</b>			<b>400</b>	<b>6</b>	<b>36</b>
<b>Overall Total</b>			<b>700</b>	<b>12</b>	<b>72</b>	<b>36</b>
Student to be allowed to submit final dissertation and to appear for viva-voce must publish a research paper in a refereed journal or present it in state or national level seminar. Candidate should submit the relevant evidence on/before the time of submission of the dissertation.						

**Course I** provides an in-depth knowledge of Research process in Physical Education and acquainting the student with different methods of Research in Physical Education

**Course II** is meant for enhancing the student's knowledge and understanding the detail statistical procedures in research require for his/her research study.

**Course III** comprises two parts,

**Course 3.1** provides student the knowledge about the data collection tool and its appropriate selection for particular research.

### Course 3.2 Open course

- Every student along with supervisor has to decide the course content based on background of his/her research area.
- In the open course, each student is expected to gather & update his/her knowledge on the recent trends in Physical Education and perspectives on the background of which he/she is to produce his/her research in the form of a dissertation.
- In this course, student is expected to study, analyze, synthesize, critique and present theoretical background of his/her research area.
- The content may be classical or modern or contemporary or scientific literature of Physical Education. The student will have to submit it to the research centre from time to time.
- A student is expected to critically present this content with a view to be able to
  - (a) Present the argument on it in his/her words;
  - (b) Formulate his/her review; of argument on the submitted content with justification;
  - (c) Critically evaluate other's appraisals of it or arguments presented therein
- This course should be so formed that it complements the topic of dissertation chosen by the student or may be independent of it.
- Student should submit all the work done in this course in written or print format and present the content in front of an expert and supervisor.

### Course IV Dissertation

- Every student has to write dissertation on the topic to be decided by him/her in consultation with a supervisor/guide. The topic of dissertation and the name of the supervisor/guide need to be approved by M. Phil Committee.
- A student is to finalize the general outline, collect the bibliographical details and complete dissertation. A dissertation is expected to give an exemplification of academic independence and research competence of the candidate.
- Student are supposed to be working on their dissertation while completion of other courses.
- Every student will be required to give a seminar on the dissertation. He/she will have to appear for viva-voce examination on dissertation. The dissertation can be submitted by the stipulated time duration according to the rule and regulation declared by University of Pune time to time, only after the completion of the M. Phil. Course work (Course I to IV).
- Every student has to stringently follow the guidelines for writing report as given in the research report format prescribed by the faculty of Physical Education, University of Pune.
- **To be allowed to submit final dissertation and viva-voce examination, every student should obtain minimum final grade points as prescribed in the rules for the degree of Master's of Philosophy, University of Pune.**
- **Student to be allowed to submit final dissertation and to appear for viva-voce must publish a research paper in a refereed journal or present it in state or national level seminar. Candidate should submit the relevant evidence on/before the time of submission of the dissertation.**



### **(C) Evaluation**

#### **Course I & II will be examined as follows**

- Two tutorials of 10 marks each should be conducted for each course throughout the year/sessions
- On the completion of all the terms, a written examination of 80 marks should be conducted for each course.

#### **Course III**

##### **3.1 Measurement & evaluation**

- One tutorial of 10 marks should be conducted for this course in I term.
- On the completion of all the terms, a written examination of 40 marks should be conducted for this course.

##### **3.2 Open course**

- Evaluation of this course will be done on the basis of presentation done by the candidate during the II term and 10 marks will be allotted for this.
- On the completion of all the terms, the work submitted by the candidate in written or print form will be evaluated by experts and 40 marks will be allotted for the same.

#### **Course IV**

- Student should prepare a Power point presentation for the seminars as follows:

Seminar		Marks
Review of related literature	Term I	25
Research proposal	Term II	25
Data collection tool & its reliability	Term II	25
Data analysis, interpretation & conclusion	Term III	25

- Evaluation of the seminars mentioned above will be done by an expert and respective supervisor.

#### **Dissertation**

- Dissertation will be evaluated internally and externally by the experts appointed by University of Pune
- Each expert will allot marks out of 100 in the format prescribed in the rules and regulation of M. Phil. Published by University of Pune from time to time.

#### **Viva voce**

- Viva voce will be organized by research center according to the directions given by the University of Pune after the report received on dissertation by both the experts.
- Evaluation tool for viva voce (100 Marks) will be developed by M. Phil committee.

**Paper I**  
**Research in Physical education**

**Objectives**

1. To acquaint the student with Philosophy of Research in Physical Education
2. To make student understand need and importance of Research in Physical Education
3. To give student knowledge of fundamentals of Research In Physical Education
4. To enable student with different data collection tools and the procedure of developing them
5. To enable the student to understand and apply different types and methods of research

**Unit I: Definition, Importance and Need of Research in Physical Education**

- Areas of Research in Physical education
  - Review of related literature and writing references
  - Reviews related to Method
  - Reviews related to Statistical Tools
  - Reviews related to Data collection tools
  - Reviews related Sampling techniques
- Selecting and Formulating Research Problem
- Steps of Research Proposal

**Unit II: Fundamentals of Research**

- Objectives of the study
  - Hypothesis
  - Assumptions of the Study
  - Delimitations of the Study
  - Limitations of the Study
  - Populations
  - Sampling and different techniques
    - Probable
    - Non-probable
  - Statistics
- **Data collection tools**
- The Questionnaire
    - The Closed Questionnaire
    - The Open Questionnaire
    - Validity & Reliability of Questionnaire
  - The Opinionnaire
    - Methods of preparing Opinionnaire
  - The Inventories
  - The Interview
    - Validity & Reliability
  - Observations

- Rating scale
- Psychomotor Tests

### **Unit III: Types and Methods in Research**

#### ➤ **Types of Research**

- Action Research
- Fundamental research

#### ➤ **Methods of Research in Physical Education**

- Historical Research
- Experimental Research
- Descriptive Research

#### ➤ **Historical Research Method**

- Historical generalization in Physical education
- The Historical Hypothesis
  - Sources of Data
    - Primary sources of Data
    - Secondary sources of Data
- Historical Criticism

### **Unit IV: Descriptive Studies**

- The survey technique
  - Public opinion survey about Physical Education & Sports
  - Fitness status surveys
- Causal comparative study
- Correlation study
- Analytical study
- Normative study
- Case study

## ➤ Experimental Research

- Experimental and Control Group
- Variables
  - Independent & Dependent Variables
  - Confounding Variables
- Controlling Extraneous Variables
- Experimental validity
  - Threats to internal & external validity
- Experimental Designs
  - Pre experimental Design
  - True Experimental Design
  - Quasi experimental Design

## Unit V: Writing Research Report

- The Research Report
  - Rules of typography & computer application
  - Format of Research Report
    - Main body of the Report
    - Cover pages
    - Chapterization
    - References and Appendices
  - Style of Writing
    - Selection of font
    - Font size
    - Reference form
    - Pagination
    - Tables
    - Figures
  - Evaluation of a Research Report
  - Interpretation of Data
  - Writing Conclusions and Recommendations

## Suggested Readings:

1. Best, J. W. & Kahn, J. V. (1995). *Research in Education*. (9<sup>th</sup> ed.). New Delhi: Prentice Hall
2. Clark, D. H. & Clark, H. H. (1979). *Research process in Physical Education, recreation & health*. Englewood Cliffs: prentice Hall
3. Johnson, B. & Christensen, L. (2008). *Education Research, Quantitative, Qualitative and Mixed Approaches*. (3rd ed.). Sage Publication: England
4. Thomas, J. R. & Nelson, J. K. (2001). *Research Methods in Physical Education*, (4<sup>th</sup> ed.). USA: Human Kinetics

## **Course 2**

### **Research and Statistics**

#### **Objectives**

1. To acquaint the student with need and importance of Research Statistics
2. To give student knowledge of fundamentals of Research Statistics
3. To enable student with different statistical tools and related procedures
4. To enable the student with writing interpretations and deriving conclusions from statistical analysis

#### **Unit I: Definition, Importance and Need of Statistics in Research**

##### ➤ **Computer Data feeding**

- The computer (Excel file and its operations)
- Data organization (Excel sheet and data organization)

##### ➤ **Parametric and Nonparametric Data**

- Ratio Scale
- Interval Scale
- Ordinal Scale
- Nominal Scale

#### **Unit II: Descriptive Statistical Analysis**

- Measures of Central Tendency
- Measures of Dispersion or Variability

##### ➤ **Measures of Variability & its Interpretation**

- Quartile deviation, Standard deviation

#### **Unit III: Measures of Relative Positions & its Interpretation**

- Standard scores- Z score, T score
- Standard Deviation
- Percentile Rank
- Stanines
- Grading

##### ➤ **Normal Probability Curve & its Interpretation**

- Normal distribution
- Non normal distribution
- Interpretation of Normal Distribution
- Applications of NPC
- NPC, Normality
- Kurtosis, Skewness

#### **Unit IV: Measures of Relationship & its Interpretation**

- Scattergram
- Spearman's rank order correlation Coefficient
- Person's Product movement Correlation Coefficient
- Interpretation of Correlation coefficient
  - Significance of the Correlation Coefficient
  - Coefficient of Determination
  - Prediction

- The outliers

#### **Unit V: Inferential Statistics**

- **Testing for Significant difference (Parametric Tests)**
  - Between Two Means
    - The Null Hypothesis
    - Degrees of freedom
    - Level of significance
    - Type I & Type II error
    - Standard Error of the Mean
    - Standard Error of the difference between Means
    - A One Sample z test
    - t-test for Independent Group
    - Paired Sample t-test
  - **Between More than two Means**
    - Analysis of Variance (ANOVA) and Post Hoc test
    - Multivariate ANOVA
    - Analysis of Co-Variance (ANCOVA) and Post Hoc test
    - Analysis of Variance of Repeated Measures and Post Hoc test
    - Multiple Regression and Correlation
- **Testing for Significant difference (Nonparametric Tests)**
  - The CHI-square
  - The Mann-Whitney test

#### ➤ **Statistics Software**

- Introduction to SPSS  
(Availability of student version or trial version)

#### **Suggested Readings**

1. Miller, D. K. (2002). *Measurement by Physical Educator*. New York: Mc Graw Hill Companies
2. Vincent, W. J. (). *Statistics in Kinesiology*. Campaign: Human Kinetics
3. Barrow, H. M. (1979). *Practical Approach to Measurement in Health & Physical Education*. (3<sup>rd</sup> ed.). Philadelphia: Lee & Febigeer
4. Sprinthall, R. C. (1997). *Basic statistical Analysis*. (5<sup>th</sup> ed.). USA: Allyn & Bacon
5. Best, J. W. & Kahn, J. V. (2006). *Research in Education*. (10<sup>th</sup> ed.). New Delhi: PHI

## Course 3.1

### Measurement and Evaluation in Physical Education

#### Objectives:

1. To introduce student with different types of tests and evaluation techniques.
2. To enable student to select appropriate tests and interpret the scores.
3. To enable student to construct tests, design new testing procedures.

#### UNIT I: Meaning of the term Test, measurement, Evaluation and Assessment

- Use of the term Test, measurement, Evaluation and Assessment in Research
- Introduction the different test: Knowledge, Psychological, Fitness, Skill, Physiological, Special Population, Test batteries, Anthropometric test
- Trends in Evaluation in Physical Education

#### UNIT II: Construction of Data collection tools

- Questionnaire and Opinionnaire
- Fitness and Skill test
- Rating Scale

#### UNIT III: Testing Validity and Reliability of testing tools

- Different methods for testing validity of tool
- Different methods for testing reliability of tool
- Norms- Types, Importance and construction

#### UNIT IV: Factors affecting measurement in physical education

- Characteristics of Test batteries
- Factors to be Considered for selecting test
- Factors to be considered for administration of test- Written, Motor test

#### Suggested Reading:

1. Miller, David. K. (2002). Measurement by the Physical Educator. New York: McGraw Hill companies.
2. John & Nelson (1998). Practical Measurements for Evaluation in Physical Education. Delhi: Surjit Publication.
3. Barrow, H.M.(1979).Practical Approach to Measurement in Physical Education. Ed. (3<sup>rd</sup> Ed.). Philadelphia: Lee & Febigeer,
4. Clarke, H. (1987). Application of Measurement in Health & Physical Education. Ed. (6<sup>th</sup> Ed.). New Jersey Prentic Hall,Inc 1987.
5. Kansal, D.K. (1996). Test & Measurement in Sports & Physical Education. New Delhi:.D.V.S.Publications,

University of Pune

**PROPOSED DRAFT**

**FOR**

**Ph.D./M.Phil./M.Ed. (Phy. Edn.) Dissertation/Thesis Organization**

The draft of the thesis/dissertation should be organized into four main sections with subsections. Use the following list to organize the draft and final electronic copy of the thesis/dissertation.

The following guidelines apply to both thesis and dissertation formats.

- a) **Language:** English and Marathi is acceptable. If candidate writing in English then Quotations in languages other than English must require a translation and if he uses Marathi then quotations in language other than Marathi must require a translation. Thesis written in Marathi Language must have two abstracts, one in Marathi and other one in English and for Dissertation/thesis written in English Language must have abstract in English only.
- b) **Paper:** The thesis must be A4 Size (8.27" x 11.69"), printed on good quality white paper (Executive bond) on one side of the paper only. Photographs and other special figures or tables may be printed on photographic quality paper. Oversize or undersize pages (e.g., maps/Drawings) can be included but will not be bound into the thesis—they will be placed in a pocket at the back of the thesis.
- d) **Margins:** Left-hand margins should be 38 mm (1.5") wide, to facilitate binding. All other margins should be well defined at approximately 25 mm (1"). Right-justification is necessary.
- e) **Font:** For the main body of the text, a standard, easily legible, 12-point font is preferred (e.g., Times New Roman) although for some font styles (e.g., Arial or Helvetica) 11-point may be acceptable. For Marathi a 16-point font is preferred (eg. Shree lipi). Condensed type is not acceptable. Chapter titles and section (sub) headings may be in a different style and should stand out clearly from the text. Text styles and title/(sub)heading styles should be consistent throughout the thesis, except that 11- or 12-point font consistent with the thesis text may be used in the table of contents. The thesis must be printed in black ink; printing should be laser or better quality.

Title	Marathi	English
Chapter Heading	16/18 Bold	14 Bold
Headings	16 Bold	14 Bold
Sub Headings	14 Bold	12 Bold
Body Text	14	12



- f) **Page Numbers:** All pages must be numbered in sequence. There must be no missing, blank, or duplicate pages.
1. The page numbers in the preliminary material are to be in lower case Roman numerals, centered at the bottom of the page, except for the title page, which is not numbered. Minimum font size is 12-point and must be consistent throughout the text.
  2. The page numbers in the main part (all text pages) are to be numbered consecutively with Arabic numerals. Placement of page numbers is as follows:
    - Assign page numbers for the first page of each chapter, bibliography, and title page but do not print the number. Number should be placed ½ inch from top of page and aligned with right margin.
- g) **Line Spacing:** 1.5 for text; exceptions are noted below.
- h) **Table of Contents:** The thesis must contain a complete table of contents. Individual entries (titles, headings, etc.) that extend onto more than one line should be single-spaced; line spacing of 1.5 should be maintained between entries. For clarity, chapter titles and (sub) headings should be in 12-point font regardless of their font size in the main body of the text. Page numbers listed in the table of content should be aligned at the right-hand side of the page.
- i) **List of Illustrations/Figures and/or Tables** (if applicable): Individual entries (titles, captions, etc.) that extend onto more than one line should be single-spaced, but line spacing of 1.5 should be maintained between entries. The lists should include any material inserted in a back pocket.
- j) **Abstract:** The thesis must contain an abstract. This should occupy a single page, and may be single-spaced, if necessary. There should be no illustrations or footnotes. Students are advised that, due to space limitations shorten abstract to minimum 350 words.

**Order of Items:** The following order of items is common to both PhD and MPhil.

### **Preliminaries**

- ✚ Title Page
- ✚ Certificate of the Guide
- ✚ Statement/Declaration by the Candidate
- ✚ Acknowledgement (Not more than TWO pages)
- ✚ Abstract
- ✚ Table of Contents
- ✚ List of Tables(if applicable)
- ✚ List of Figures(if applicable)
- ✚ Body of Thesis

- ✚ Bibliography
- ✚ Appendix (If Applicable)
- ✚ Vita(optional)

### **Appendices and other Supplementary Material**

- a) **General:** Appendices may include survey forms, or any other supplementary material excluding data. Content and format should be in accordance with discipline practice.
- b) **Copyright Permission:** Where a thesis includes copyrighted material (e.g., publications), copyright permission letters should be included as a separate appendix. Reprints may be included in the appendices, provided copyright permission is obtained.

### **Electronic Formats**

- a) **General:** Students may include supplementary material in electronic format. A CD-ROM or DVD-ROM (read-only) containing this material should be submitted in a hard case and will go in the back pocket of the thesis. A description of the supplementary material, including file names, formats, and a brief description of the contents, should be included as an appendix in the paper copy of the thesis and as a "read-me" file on the CD/DVD-ROM.
- b) **Labeling:** The CD/DVD-ROM must include both electronic and physical labels that list the thesis title, author, institution, and date.

### **Vita**

Include your vita, or biographical sketch, with the document. List all educational institutions attended after graduation from high school and the date you received the undergraduate or graduate degree (or both). List of professional organizations and other personal information of a scholarly nature. Do not include a list of publications. Do not number the vita page. Margins are identical to the preliminary pages. The Vita is limited to one page.

# Effects of Traditional Teaching and Cooperative Learning

## Methods on Jumping Performance

in Athletics

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word except adjectives  
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### Submission Statement

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A Thesis submitted to the

University of Pune for the Degree of

Doctor of Philosophy in

Physical Education

Researcher Name  
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Researcher

Deepak Tanaji Shendkar

Guide Name  
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Centred

Research Guide

T. K. Bera, Ph.D.

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Research Centre

Department of Physical Education

University of Pune, Pune-7,

Maharashtra, India

Month and Year of  
Submission

January, 2007

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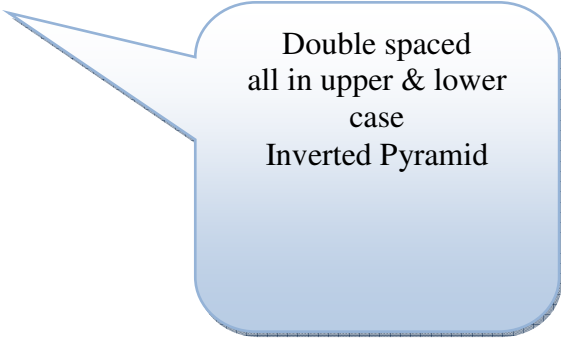
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**Ph.D.  
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**Effects of Traditional Teaching and Cooperative  
Learning Methods on Jumping Performance  
in Athletics**



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**March  
2007**

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## Certificate

This is to certify that **Mr. Deepak Shendkar** has written this thesis entitled '**Effect of Traditional Teaching and Co-operative Learning Methods on Jumping Performance in Athletics**' for the degree of Ph.D. (Physical Education) of the University of Pune. The research work done by him is his original work.

**Mr. Deepak Shendkar** has worked under my supervision for the required period as per the ordinances. The thesis is satisfactory from the language point of view and presentation of subject matter is logical and sequential. As per rule I am forwarding the same to the University of Pune for evaluation.

April 2009

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Signature of Research Guide

(Name & Address of the Guide  
must be mentioned here)

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## Declaration by the Candidate

As required by the university ordinances, I wish to state that the work embodied in this thesis entitled, '**Effect of Traditional Teaching and Co-operative Learning Methods on Jumping Performance in Athletics**' forms my own contribution to the research work carried out under the guidance of **Dr. T. K. Bera** at the Physical Education Department, University of Pune. This work has not been submitted for any other degree of this or any other University. Whenever references have been made to previous works of others, it has been clearly indicated as such and included in the bibliography.

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March, 2007

**(Deepak T. Shendkar)**

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**List of Tables**

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**Table**

**Page**

4.1 Descriptive Statistics: Long Jump .....	1
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Figure

4.1 Triple Jump Knowledge Performance Test Score Distribution..... 1

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## Chapter I

### Introduction

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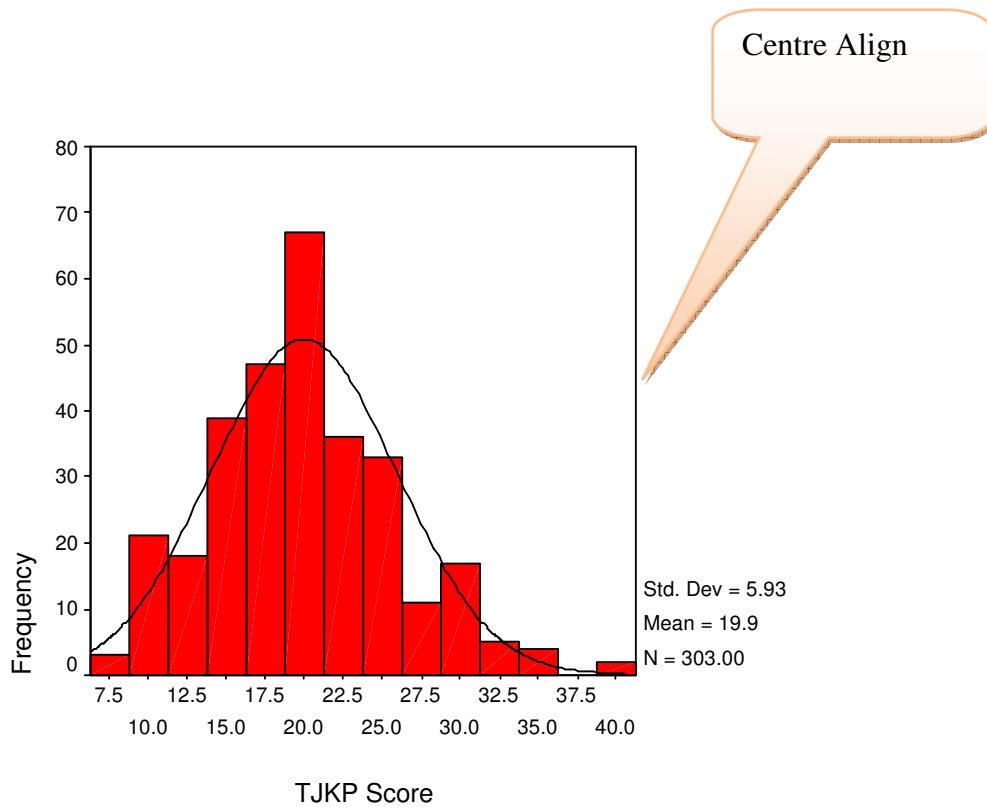
**Table 4.1**  
**Tests of Between-Subjects Effects**

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Source	Sum of Squares	df	Mean Square	F	Sig.
Gender	3.942	1	3.942	10.428	0.002
Teaching Method	29.206	1	29.206	77.259	0.000
Gender*Teaching Method	0.431	1	0.431	1.141	0.287
Error	52.546	139	0.378		

Note: df=Degrees of Freedom

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**Figure 4.1 Triple Jump Knowledge Performance Test Score Distribution**

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## Bibliography

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