

CHAPTER 5

Research Ethics

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1. Introduction to Research Ethics

– What is Ethics?

- Comes from a Greek word ‘ethos’ means character
- is a systematic study of value concepts...
- Norms for conduct between acceptable and unacceptable behavior
- Method, procedure or perspective for deciding how to act and analyzing complex problems and issues

– What is ethics in Research

- Research ethics primarily deals with the interaction between the people they study/ laboratory animals
- Considered in planning, conducting and evaluating research

2. Why is Research Ethics Important?

- a) Promotes the aims of research
- b) Promote the values that are essential to collaborative research
- c) Ensure that researchers can be held accountable to the public
- d) Help to build public support for research
- e) Promote a variety of other important moral and social values



3. Deception and Misconduct in Research

- Why do we study research ethics?
 - We may be highly ethical ----
 - We may never falsify data or plagiarize ----
 - Misconduct is a rare occurrence in research
- Why researchers commit misconduct?
 - “Bad apple” theory
 - “Stressful” or “imperfect” environment theory

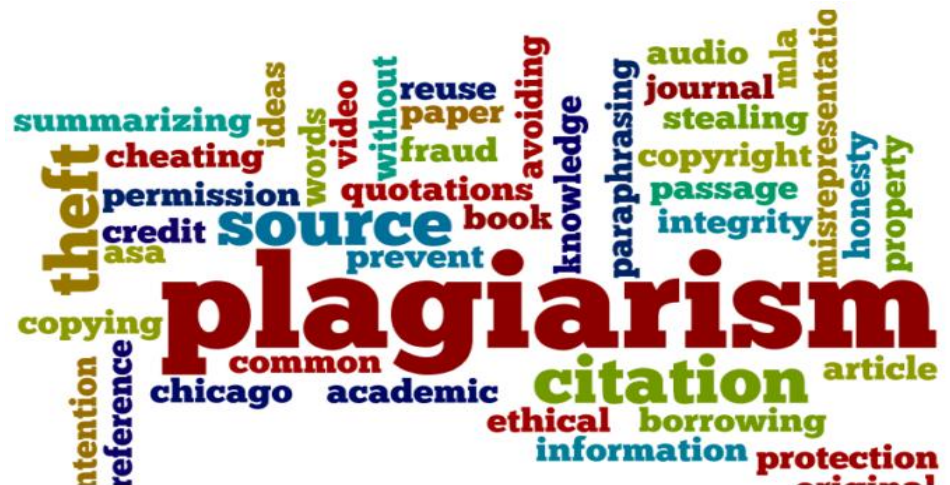
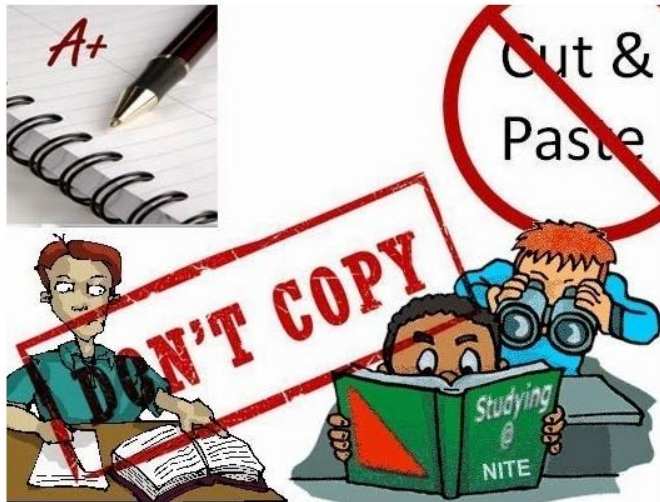


Misconduct Forms

- 1. Fabrication** is the act of making up data or results, then recording or reporting them as part of the research record
 - Fabrication is ethically wrong because it is likely to lead to harm to others
 - It is legally required for funding agencies and research institutions to take actions against researchers who fabricate

- 2. Falsification** is intentional alteration or presentation of original findings in a way which distorts the result
 - Scientifically unjustified alteration or selection of data or result
 - Manipulating research materials, equipment or processes
 - Misrepresentation to omit results or data pertinent to conclusion

3. Plagiarism is presenting someone else's research plan, manuscript, article or text, or parts thereof, as one's own – appropriation of another person's ideas, processes, results or words without giving appropriate credit, including those obtained through confidential review of others' research proposals and manuscript



4. Ethical Decision Making in Research (Case Studies)

Case 1

- The research protocol for a study on new material characterization requires the investigation of experimental test to 15 sets of test rollers in low, medium and high load conditions. Mr. A almost finished the experiment for Dr. B and left with 2 tests and unable to continue due to his personal cases. Mr. A decided to report by extrapolate from the 13 completed results to produce the 2 remaining results

Case 2

- Dr. T has just discovered a mathematical error in a paper that has been accepted for publication in a journal. The error does not affect the overall results of his research, but it is potentially misleading. The journal has just gone to press, so it is too late to catch the error before it appears in print. In order to avoid embarrassment, Dr. T decided to ignore the error

Case 3

- Dr. S is a post-doctoral student in a computer science working on some programs that eliminate computer virus. Two other graduate students are working with her on the project, which is directed by a senior researcher. Dr. S has just received an email from a researcher team that is working on a similar project at another university. The other team would like Dr. S to share some preliminary data and designs related to the project. Dr. S has not applied for a patent on this research, though she has discussed possible patents with her supervisor.



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Exercises 5-1

- Evaluate the case given below regarding a graduate student MSc thesis work and his plagiarism.

Thank You!

