

Ethics in Research & Publication

A.K.M. A. Islam

International Islamic University Chittagong



Outline

- ▣ PhD Journey via USIM
- ▣ Research Ethics
- ▣ Focus on Research Ethics
- ▣ Knowledge of Unethical Behaviours – How to Avoid
- ▣ Research Misconduct - Plagiarism, Fraud, Fabrication & Falsification of Data, Conflicts of Interest, Citation, Copyright
- ▣ Avoiding Misconduct - Ethical Guides
- ▣ Plagiarism Scandals – Real life Consequences
- ▣ Oral & Poster Presentation, Publication
- ▣ Conclusion
- ▣ Acknowledgements

PhD Journey via USIM

- ▣ **PhD Supervisors & Research Topic**
- ▣ **USIM Requirements**
- ▣ **PhD Work- Engagement ?**
- ▣ **Thesis Writing**
- ▣ **Research Presentation in Seminars**
- ▣ **Research Publication – Ethical behaviour**

PhD Journey via USIM

- ▣ A PhD degree is awarded for demonstrating the ability to carry out independent research to academic standards.

Normally, a successful PhD candidate shows this ability by

- having studied a particular area within a subject for 3-4 yrs
- having made at least one new findings &/or at least one contribution to the knowledge .
- having written a thesis, placing the own independent, novel contribution in context & comparing it critically with other approaches and
- having defended the thesis in the viva, which is a discussion with examiners, who are experts in the area.

PhD Journey *contd.*

- ▣ The thesis is a monograph, ie, a self-contained piece of work, written solely by the PhD candidate and no-one else.
- ▣ It sets out a certain problem that the candidate has worked on, under guidance of one or more academic advisors.
- ▣ It motivates and defines the problem, reviews existing approaches to the problem, identifies through critical analysis a clear gap for a possible novel academic contribution, & spells out a **so-called hypothesis**, which is a proposed explanation for the problem or a proposed solution to a problem.
- ▣ The thesis also explains in sufficient detail, & justifies, the work undertaken to decide on the hypothesis/ hypotheses.

PhD Journey *contd.*

Writing a Thesis

- ▣ At the point of writing up, PhD students are unlikely to have written many theses: typically one document at Master level. The PhD thesis spans a much longer time scale & broader subject area. It requires more care than any previously written thesis.

Structuring the Thesis

A thesis has the same first-level structure as any research paper:

1. Introduction
2. Motivation
3. Related work
4. Experiments/Data collection
5. Analysis
6. Conclusions

➔ Of course, there are many variations to this core structure.

PhD Journey *contd.*

- ▣ **Don't Take Courses! Your job is research, not more courses!**

You can take courses, but you should have a very good reason for doing so.

- ▣ As a producer of research, **focus on your primary task – develop your own research program.**

- ▣ Your job is research – engaging in other works will delay completion of the thesis – **Problems!**

An even larger cost: you will fail to write a really great thesis.

➔ As a PhD student, your time is very valuable; treat it that way.

PhD Journey *contd.*

Presentation:

- ▣ Present your work in seminars whenever possible.

Writing matters:

- ▣ Your job as a researcher is not only to create new knowledge, but also to communicate it effectively.
- ▣ You cannot persuade your reader that you have done something important if they cannot figure out what you did or why even you think it is important.
- ▣ **Bad writing** often accompanies muddled thinking. State theses clearly & precisely & you may be able to see where the gaps are that need to be filled in.

PhD Journey *contd.*

Presentation Matters:

- ▣ You should be able to summarize what question you are asking, why it is important, what is new, and what you will do to convince the seminar attendee in no more than a few sentences.
 - ▣ If you cannot do this in intelligible English, then you do not understand your own topic well enough.
 - ▣ Why? The profession needs a simple take-away idea from your paper that is memorable.
- ➔ Much depends on your creativity and inspiration, your insightfulness and energy.

Research Ethics

- ▣ It is important to know what constitutes **Ethical Research**.

All researchers should be familiar with the basic ethical principles & have up-to-date knowledge about policies & procedures.

- ▣ The duty lies with the researcher to seek out & fully understand research ethics.
- ▣ All parts of research projects – from the project design to submission of the results for peer review – have to be upstanding **in order to be considered ethical**.

Research Ethics *contd.*

- ▣ Writing a research paper poses challenges in gathering literature and providing evidence for making your paper stronger.
- ▣ Drawing upon previously established ideas & values and adding pertinent information in your paper are necessary steps, but these need to be done with caution without falling into the trap of plagiarism.

Focus on Research Ethics

Research Misconduct

- ▣ Plagiarism
- ▣ Fabrication & falsification of data
- ▣ Careless or biased recording & reporting data
- ▣ Conflicts of Interest
- ▣ Authorship
- ▣ Copyright violation

WHAT IS PLAGIARISM ?

(And why you should care!)

What is plagiarism?

(And why you should care!)

Plagiarism - appropriation of someone else's ideas, results or words **without giving appropriate credit** ...in proposing, performing, reviewing research, or in reporting research results committed **intentionally, knowingly or recklessly**.

***DOES NOT** include honest error, conflicting data, differences of opinion, or differences in interpretations or judgments about data or experimental design*

Research Ethics - plagiarism

- ▣ Considered as a **serious academic and intellectual offense**, plagiarism can result in highly negative consequences such as paper retractions & loss of author credibility & reputation. It is currently a grave problem in academic publishing.
- ▣ **It is thus imperative for researchers to increase their understanding about plagiarism**

More Research Misconduct

- ▣ **Fabrication** - making up data or results
- ▣ **Falsification** - inaccurate representation of the results by changing or omitting data, by manipulating research materials, equipment or processes

Several Types of Plagiarism

- ▣ Wholesale/Direct/Conscious/Intentional Plagiarism
- ▣ Patchwork Plagiarism
- ▣ Idea-based Plagiarism
- ▣ Self-Plagiarism
- ▣ Accidental Plagiarism
- ▣ Mosaic/Sprinkle/Unintentional Plagiarism
- ▣ Bad Paraphrasing



Wholesale/Direct/Copying/Conscious/ Intentional Plagiarism

- ▣ Copying an entire source or a large section of a source and passing it off as one's own work.



The deliberate misrepresentation of someone else's material as one's own. This form of plagiarism is subject to the most **severe academic punishment**.

Don't do it.

Examples

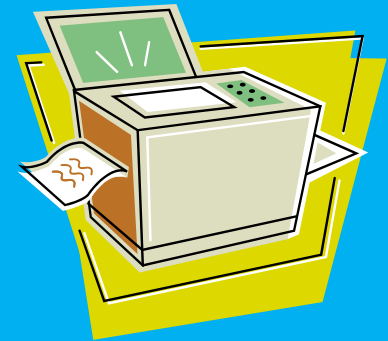
- ▣ Intentionally copying another's work
- ▣ Having someone else write your paper for you
- ▣ Claiming copied material in your paper as your own



Contd.

This is the most well-known and, sadly, the most common type of plagiarism.

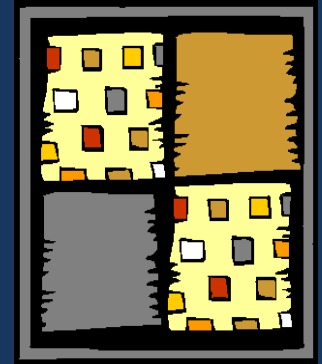
If you copy someone else's work and put your name on it, you have plagiarized.



Patchwork Plagiarism

Patchwork plagiarism is similar to copying & is perhaps the second most common type of plagiarism.

This occurs when the plagiarizer borrows the "phrases & clauses from the original source & weaves them into his own writing" without putting the phrases in quotation marks or citing the author.



([McConnell Library, Radford University](#))

Idea-based Plagiarism



- ▣ Presenting someone else's unique interpretation, theory, or analysis as one's own.
- ▣ This constitutes plagiarism even if the wording has been changed.

Sprinkle /Unintentional Plagiarism

- ▣ Occasional failure to cite properly through missing information, errors in punctuation, etc.
- 1. Failing, accidentally, to provide sufficient information about a source from which you have used language and/or ideas
- 2. Failing, accidentally, to clearly differentiate between your words & ideas and the words & ideas that you get from other sources
- 3. Making errors in the placement & use of quotation marks

Often unintentional.



Intentional vs Unintentional - Summary

▣ Intentional

- Copying a friend's work
- Buying or borrowing papers
- **Cutting & pasting blocks of text from electronic sources without documenting**
- Media "borrowing" without documentation
- **Web publishing without permissions of creators**



▣ Unintentional

- Careless **paraphrasing**
- Poor documentation
- Quoting excessively
- Failure to use your own "voice"

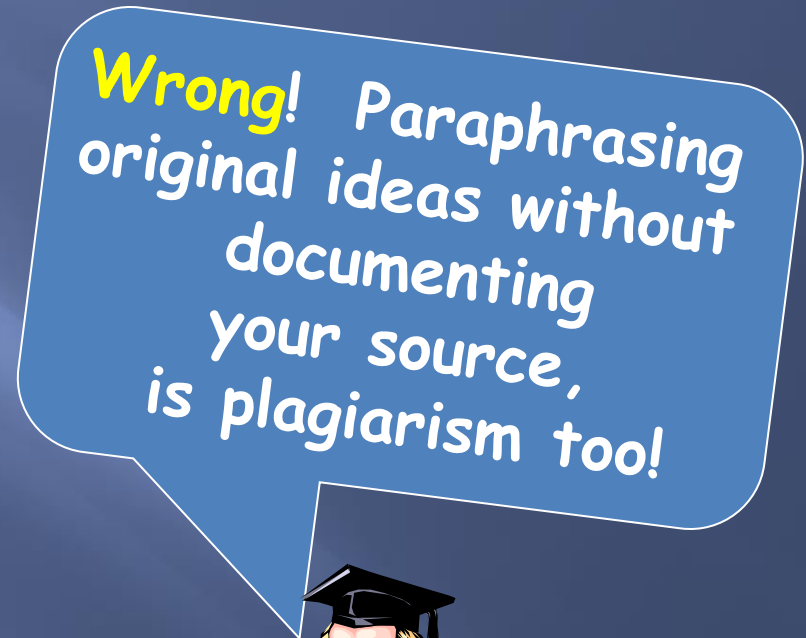
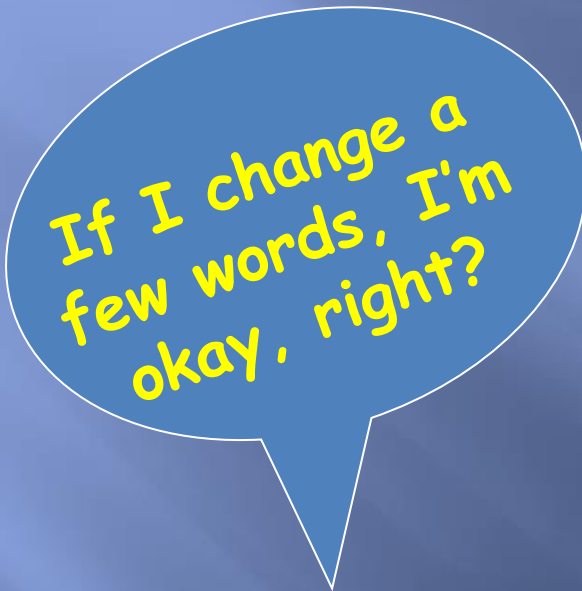
Paraphrasing Plagiarism



Here the plagiarizer paraphrases or summarizes another's work without citing the source.

Even changing the words a little or using synonyms but retaining the author's essential thoughts, sentence structure, and/or style without citing the source - is still considered plagiarism.

What's the big deal?



Paraphrase *contd.*

*In a paraphrase, your goal is to rewrite a statement **into different words and with a different sentence structure** without losing the original meaning of the text and while maintaining the same general length as the original.*

Paraphrasing *contd.*

Paraphrasing means rephrasing the words of an author, putting his/her thoughts in your own words. When you paraphrase, you rework the source's ideas, words, phrases, & sentence structures with your own. Like quotations, paraphrased material must be followed with in-text documentation & cited on your Works-Cited page.

Paraphrase when:

- ❑ You plan to use information on your note cards and wish to avoid plagiarizing
- ❑ You want to avoid overusing quotations
- ❑ You want to use your own voice to present information

Paraphrasing Properly

Original

Lester, James D. Writing Research Papers. 2nd ed. (1976): 46-47.

“ Students frequently overuse direct quotation in taking notes, and as a result they overuse quotations in the final paper. Probably only about 10% of your final manuscript should appear as directly quoted matter. Therefore, you should strive to limit the amount of exact transcribing of source materials while taking notes” [Lester 46].

Good Paraphrase

In research papers students often quote excessively, failing to keep quoted material down to a desirable level. Since the problem usually originates during note taking, it is essential to minimize the material recorded verbatim [Lester 46].

Advice “Keep Away from”

Direct plagiarism

- writing someone else's paper word for word without appropriate citation

Self-plagiarism

- using your own previous paper, fully or partially, and reproducing it in the new assignment without permission

Accidental plagiarism

- the most common type when a person changes words in another's paper but the structure and the whole meaning remain the same

Mosaic plagiarism

- when a person forgets to refer to sources, misquoting it, rewrites papers without giving credit where it's needed

Further Note on Plagiarism

- ▣ If a researcher plagiarises the work of others, they are **bringing into question the integrity, ethics, and trustworthiness of the sum total of his/her research.**
 - ▣ In addition, plagiarism is both an illegal act & punishable, considered to be on the same level as stealing from the author that which he/she originally created.
- ➔ **Research MSs with these problems are rejected**

Scientific Misconduct

Misconduct includes:

- Fraud.
- Careless or biased recording & reporting data.
- Mishandling data.
- Incomplete reporting of results.

Fraud is the deliberate falsification, misrepresentation, or plagiarizing of data, findings, or the ideas of others.

Real life consequences

Is it worth
the risk?

▣ Many examples

.....

**Sooner or later
..... ethical violations get exposed**

RESEARCH INTEGRITY

24 MAY 2002 VOL 296 SCIENCE, p 1376

Pioneering Physics Papers Under Suspicion for Data Manipulation

Recent discoveries at Bell Laboratories—the research arm of Lucent Technologies in Murray Hill, New Jersey—said to be of Nobel

Angeles, and director of the California NanoSystems Institute: “It’s hard to understand. I know these people. Most of them are

Plagiarism scandals

-- Real life consequences

Was it worth ←
the risk ?



**German Defence Minister quits over PhD
plagiarism scandal**

Wednesday 2 March 2011

Contd. Real life consequences

Is it worth
the risk?

RESEARCH INTEGRITY

24 MAY 2002 VOL 296 SCIENCE, p 1376

Pioneering Physics Papers Under Suspicion for Data Manipulation

Recent discoveries at Bell Laboratories—the research arm of Lucent Technologies in Murray Hill, New Jersey—said to be of Nobel

Angeles, and director of the California NanoSystems Institute: “It’s hard to understand. I know these people. Most of them are

The Science magazine logo, featuring the word "Science" in a white serif font on a green rectangular background.

27 JULY 2007 VOL 317 SCIENCE www.sciencemag.org

Retraction

WE WISH TO RETRACT OUR REPORT “CDX2 GENE EXPRESSION AND TROPHECTODERM LINEAGE specification in mouse embryos” (1). Allegations of research misconduct were received by the University of Missouri-Columbia (MU) Provost, and an investigation found that the first author (K.D.) engaged in research misconduct by intentionally falsifying and fabricating digital

Real life consequences

Paper trail reveals references go unread by citing authors

Philip Ball

Many of the references cited in scientific papers have not been read by the authors citing them, according to an analysis of how errors in citations propagate through the literature.

It isn't easy to establish directly — and truthfully — whether citations have been

reference being copied from someone else's citation list. The most common misprint appeared 78 times.

Based on the number of distinct misprints, the two researchers estimate that only 22–23% of citations followed from a reading of the original paper. And they postulate that this is typical of the scientific literature as a whole.

NATURE|VOL 420 | 12 DECEMBER 2002 p 594

Real life consequences

C&EN
CHEMICAL & ENGINEERING NEWS

[Home](#) [Current Issue](#) [Features](#) [Alerts](#) [Careers](#) [Multimedia](#) [Archive](#)

[Home](#) » [Science & Technology](#) » **A Massive Case Of Fraud**

SCIENCE / TECHNOLOGY

FEBRUARY 13, 2008 | VOLUME 86, NUMBER 07 | PP. 37-38

A Massive Case Of Fraud

Journal editors are left reeling as publishers move to rid their archives of scientist's falsified research

[William G. Schulz](#)

A CHEMIST IN INDIA has been found guilty of plagiarizing and/or falsifying more than 70 research papers published in a wide variety of Western scientific journals between 2004 and 2007, according to documents from his university, copies of which were obtained by C&EN. Some journal editors left reeling by the incident say it is one of the most spectacular and outrageous cases of scientific fraud they have ever seen.

The culprit, sources say, is chemistry professor Pattim Chiranjeevi of [Sri Venkateswara University](#) in Tirupati, India. SVU conducted an investigation into Chiranjeevi's work after a journal editor presented evidence to university officials that the professor had plagiarized and possibly falsified several manuscript submissions. Chiranjeevi, who communicates through a wide variety of e-mail addresses, has not responded to multiple requests for comment by C&EN.

Chiranjeevi retains his teaching position at SVU, according to a university source who has requested anonymity. "He is a permanent employee of the university, and the administration cannot fire him easily," the source says. Instead, Chiranjeevi has been barred from research and research supervision and from holding any administrative post at the university.


©Shutterstock

A CHEMIST IN INDIA has been found guilty of plagiarizing and/or falsifying more than 70 research papers published in a wide variety of Western scientific journals between 2004 and 2007, according to documents from his university, copies of which were obtained by C&EN. Some journal editors left reeling by the incident say it is one of the most spectacular and outrageous cases of scientific fraud they have ever seen.

Avoiding Plagiarism

Avoiding plagiarism is quite simple.

The best method for avoiding it is to **simply be honest**;

- ▣ **When you've used a source in your paper, give credit where it's due.**
- ▣ **Acknowledge the author of the original work you've used.**

Citation

- ▣ Read the work before you cite
- ▣ Important to cite the work correctly and completely

Do I have to cite everything?



Nope !

Ex. common knowledge:
John Adams was our the
second president of US.
The Japanese attacked Pearl
Harbor on Dec 7, 1941.

- **Facts that are widely known, or**
- **Information or judgments considered “common knowledge”**

Further on Citation

<http://libguides.rutgers.edu/CitingSources>

- Proper citation should be given immediately after every idea or fact that derives from another source.
- Acknowledge direct quotes or statements with quotation marks.
- Some facts are considered common scientific knowledge & do not need to be cited.
- **Self plagiarism is still plagiarism !**
- A complete bibliographic reference is written at the end of the paper.
- When citing online resources that are not available in print, include the Website's URL and the date the information was found.
-

Further on Citation

<http://libguides.rutgers.edu/CitingSources>

- ▣ Read the work before you cite
- ▣ Important to cite the work correctly & completely•

Paper trail reveals references go unread by citing authors

Philip Ball

Many of the references cited in scientific papers have not been read by the authors citing them, according to an analysis of how errors in citations propagate through the literature.

It isn't easy to establish directly — and truthfully — whether citations have been

reference being copied from someone else's citation list. The most common misprint appeared 78 times.

Based on the number of distinct misprints, the two researchers estimate that only 22–23% of citations followed from a reading of the original paper. And they postulate that this is typical of the scientific literature as a whole.

NATURE|VOL 420 | 12 DECEMBER 2002 p 594

Copyright : definition

“the exclusive legal right to reproduce, publish and sell the matter and form of a literary, musical or artistic work.”

Note that this includes scientific publications.

Copyright protection is extended to anything that is “**fixed in a tangible medium**”

- An article
- An email message
- A website

Everything from books and computer disks to wall carvings

Oral & Poster Presentation

- All text should be in your own words. Ideas or data taken from other sources should be cited on a slide (preferable) or orally.
- In the case of poster presentations, cite material in a bibliography, similar to a written paper.
- Any figures not produced by the presenter in an oral presentation or by the authors in a poster presentation must be attributed

Asking Permission to use copyrighted material

- Identify the owner (author or publisher?)
- Send a letter/email requesting permission to use a table, graph or other data or an entire work.
- Permission is not automatically assumed if you have not heard from the owner.

Continued effort is required - or do not use the source.

- Use of figures without permission for teaching purposes is allowed.

Conflict of Interest

- ▣ When a researcher, author, editor, or reviewer has a financial/personal interest or belief that could affect his/her objectivity, or inappropriately influence his/her actions, a potential conflict of interest exists.
- ▣ Such relationships are also known as dual commitments, competing interests, or competing loyalties.

Some ethical principles

The following is a rough & general summary of some ethical principles that various codes address*:

Honesty

Strive for honesty in all research communications. Honestly report data, results, methods & procedures, & publication status. Do not fabricate, falsify, or misrepresent data. Do not deceive colleagues, research sponsors. public.

Objectivity

Strive to avoid bias in design, data analysis, data interpretation, peer review, personnel decisions, expert testimony, and other aspects of research where objectivity is expected or required. Avoid or minimize bias or self-deception. Disclose personal or financial interests that may affect research.

Integrity

Keep your promises and agreements; act with sincerity; strive for consistency of thought and action.

Contd.

Carefulness

Avoid careless errors and negligence; carefully and critically examine your own work & the work of your peers. Keep good records of research activities, such as data collection, research design, & correspondence with journals.

Openness

Share data, results, ideas, tools, resources. Be open to criticism and new ideas.

Respect for Intellectual Property

Honor patents, copyrights, and other forms of intellectual property. Do not use unpublished data, methods, or results without permission. Give proper acknowledgement or credit for all contributions to research. **Never plagiarize.**

Confidentiality

Protect confidential communications, such as papers or grants submitted for publication, personnel records, trade or military secrets, and patient records.

Contd.

Responsible Publication

Publish in order to advance research and scholarship, not to advance just your own career. Avoid wasteful and duplicative publication.

Social Responsibility

Strive to promote social good and prevent or mitigate social harms through research, public education, and advocacy.

Competence

Maintain and improve your own professional competence and expertise through lifelong education and learning.

•Adapted from Shamoo A and Resnik D. 2015. [Responsible Conduct of Research, 3rd ed.](#)
•(New York: Oxford University Press).

Publish your work

Why Publish?

- **“A paper is an organized description of hypotheses, data and conclusions, intended to instruct the reader.** If your research does not generate papers, it might just as well not have been done” (G. Whitesides, Adv. Mater., 2004, 16, 1375)
- **“if it wasn’t published, it wasn’t done”** - in E.H. Miller 1993

Excuses from USIM PhDs ? -- No !



Conclusion

Rationale for academic integrity (as if it were necessary!)

- ▣ When you copy you cheat yourself. **You limit your own learning.**
- ▣ The **consequences are not worth the risks !**
- ▣ It is only right to give credit to authors whose ideas you use
- ▣ Citing gives authority to the information you present
- ▣ Citing makes it possible for your readers to locate your source
- ▣ Cheating is unethical behavior



Conclusion

Rationale for academic integrity

(as if it were necessary!)

Research Ethics is an integral part of graduate research.

STATEMENTS, FIGURES AND TABLES

Reproduced in a Report, Presentation and/or Paper require proper citation.

Published work is protected by Copyright Law

Copyright permission is necessary if you are reproducing your work in another publication
(This applies even if it is your own work)

My academic
reputation is valuable
to me



Conclusion

Be Serious and Active

Useful Tips to Succeed in USIM PhD research

- BE SELFISH. You are working for your degree program.
- Set a weekly goal and evaluate the progress routinely.
- Minimize the time on Internet for nonscientific browsing. Just because you are sitting at your desk does not mean that your day was productive.
- BE HAPPY,
BUT REMEMBER TO PUT IN MINIMUM OF 4 HRS PER DAY FOR
USIM PhD WORK (although time than this is necessary)
- IT IS YOUR PhD. IF YOU DO NOT TAKE INTEREST OR PUT HARD
WORK INTO IT, NOBODY ELSE WILL!!

This is an exciting time in your career. Make it a worthwhile effort.

My academic
reputation is valuable
to me



Acknowledgements



Web sources and materials used in the slide presentation are gratefully acknowledged

Good Luck!

Thank you

