**MSC SYNOPSIS ON PLAGIARISM**

BY

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# Tentative Title

An algorithm to estimate the extent of plagiarism in research works.

# Introduction

Plagiarism can be defined as copying of someone else work and passing it as your own. According to plagiarism.org, plagiarism can be described as

* turning in someone else's work as your own,
* copying words or ideas from someone else without giving referencing,
* quoting another person work without putting it in quotation marks,
* giving incorrect information about the source of a quotation,
* paraphrasing without giving credit and
* copying too many ideas and words from a source which makes up the majority of your work, whether you give credit or not.

Plagiarism is a form of academic misconduct. Many researchers found out that there is an increase of plagiarism in academic institutions worldwide and that Internet is the main driver that intensifies the problem. With the number of publication papers and essays available on the Web, students found it easy to copy ideas and present it as their own (Sheard *et al*, 2002; Gruner and Naven, 2005; Leung and Chan, 2007; Jones, 2008; Skaar and Hammer, 2013). However, Internet also provides software for detection of plagiarism in assignments and/or papers submitted by students. Different tools are available on the Internet which can help the academic institutions to curb plagiarism.

In the quest to detect plagiarism in works submitted by students, an algorithm will be studied to estimate plagiarism in the documents.

## Why do students plagiarise?

Maurer et al (2006) has classified plagiarism in three main categories:

* Accidentally: This happens when the students do not have proper knowledge of what is plagiarism.
* Intentionally: The students are aware of what is plagiarism, and perform plagiarism deliberately.
* Unintentionally: The students know about plagiarism, but they are not aware that the work submitted can be considered as plagiarism. For example, student cannot distinguish between plagiarise text and paraphrasing text and sometimes they wrongly cited the source.

According to University of Alberta and Geri Spieler (2012), Students plagiarise due to the several reasons. Five reasons are listed below.

1. **Misconception of the word plagiarism**: Students think that only by writing text that is copying and pasting they perform plagiarism. However the lack of references and attribution of someone else ideas is also plagiarism.
2. **Lack of research skills**: Students often use sources that need accuracy and credibility such as Wikipedia and they often do not know how to search materials on the internet and libraries.
3. **Online information is perceived as Public Knowledge**:Since Internet provides us with a large amount of information freely, many students do not realize that when working on assignment proper references should be made and that is why in many work improper citation and references are being made.
4. **Plagiarism v/s Paraphrasing**: Many students are confused between the word plagiarisms and paraphrasing. In the effort of making their work original and by putting words taken from another material in their own words students unknowingly plagiarise. Studies have shown that around 60% of students cannot distinguish between those two words (Roig, 1999).
5. **In Quest to obtain a Good Grade**: Due to pressure that families put on their children and sometimes personal expectations to obtain or maintain good results, students plagiarise their works.

***Note: A survey will need to be done to find out why students plagiarise in MU***

## Plagiarism Prevention

Universities worldwide are taking measures to prevent and detect plagiarism. Many educational institutions have penalties for students who plagiarise their work. Such penalties include low grade, additional assignment, suspension, expulsion, going to the disciplinary committee and revocation of degree or certificate (Maurer, H *et al,* 2006). Penalties for detected cases of plagiarism vary from institutions to institutions. The following is a list of universities with different ways they are employing to curb plagiarism.

1. **University of Mauritius**

The University of Mauritius takes plagiarism very seriously, and it is a form of legal theft in the republic of Mauritius. The university provides to its students a regulation section on its website (http://www.uom.ac.mu/aboutus/REGULATIONS/regulations.htm) whereby Chapter 8 defines plagiarism as well the procedures for handling plagiarism. The consequences of plagiarism as stated in the regulation and depending on the severity of the act are:

* written warning is issued to the students or
* reduce mark of the assignment or
* allocation of zero mark to the student or
* written warning and new assignment are given to the student or
* Fine of Rs 5000 for the first offence, Rs 10 000 for the second offence, and for the third offence either suspension or expulsion from the university.

The university also use Turnitin, a plagiarism detection tool which checks the report submitted by students. This tool is also available to all final year students (undergraduate and postgraduate students) to scan their work prior to submission.

1. **University of Leicester**

The university provides a proper definition of what is plagiarism on its website. An online tutorial is also available to students to explain them on how to avoid plagiarism. Furthermore, it is stated that each department should ensure that every student understand clearly what constitutes plagiarism. In case of suspected and confirmed plagiarism, the respective department will follow procedures defined in the Regulations governing student discipline. For the first offence in the first semester, this is treated as poor academic practice and a formal warning is issued by the Departmental Plagiarism Officer to student, and this student is given academic support. The university makes use of Turnitin**™ which is a plagiarism detection tool. Based on the report provided, penalties are decided.**  Students are awarded zero marks and require submitting the assignment again in case of a first offence and percentage of plagiarism lies between 20% to 40 %. If the percentage plagiarism lies between 40% to 90% zero mark will be awarded, and mark will be reduced by 10% upon resubmitting the assignment again. In case of repeated offences the level of classification is reduced by one class at the end of the studies. For serious offences, students will need to pass in disciplinary panel.

1. **University of Cambridge**

Guidance on plagiarism and on how to avoid it is provided to the university staff and students at the following link <http://www.admin.cam.ac.uk/univ/plagiarism/>.

Besides, it is stated in the document of plagiarism and good academic practices made by the University of Cambridge that plagiarism is not acceptable at any stage and that the academic staff plays a vital role in educating students on this matter. The university also makes use of Turnitin UK software for text matching. If the software detects matches the examiners will thus review the results to find out whether it is a minor or major issue. If students have plagiarised their work, the penalty may be strict, and their degree may be suspended [Cambridge, 2012].

1. **University of Cape Town**

There is an increasing concern on plagiarism in the Cape Town University. A student guide on how to avoid plagiarism is available. In this Guide, it is mentioned that for each course, academic staffs should recommend the referencing conventions and each time the students need to submit their work they need to sign a declaration form on plagiarism. The consequences for committing plagiarism are: zero marked awarded on the plagiarised work or student may fail the course. In addition, the case should be referred to the Vice-Chancellor and in case of major issue; the student may even be expelled from the University [Cape Town, 2005].

1. **University of Malta**

Malta University provides a resource pack to students for helping them in understanding and avoiding plagiarism. In addition, the document also states the expectation and the consequences of engaging in plagiarism [Spiteri, D *et al*, 2007]. According to the University Assessment Regulations, 2009, penalties vary depending on the severity of the breach of regulations, this include an oral writing which most of the time is a warning in case of first or minor offence, fine not exceeding €150, reduction of the mark for the specific assignment, failure in the module, failure of the whole year, degree classification reduced, suspension and expulsion.

# Background Study

This chapter explain the different forms of plagiarism together with the available tools for plagiarism detection.

## Forms of Plagiarism

Turnitin is a solution used by many educational institutions for Plagiarism detection. It is a service of iParadigms, LLC. The company did a survey whereby both educators of higher and secondary institution participated in order to take actions on how prevalent and problematic the different kinds of plagiarism are common among their students. The survey identifies 10 types of plagiarism and ranks them according to their occurrence and severity [Meyer, 2012]. The 10 forms of plagiarism are defined below.

### Cloning or Direct Plagiarism

Copying of someone else work word-by-word and passing it as your own material.

### CTRL-C

Assignments or works that contain significant portions of text from a source without modifications.

### Find- Replace

Altering important words and phrases but keeping the necessary content of the source. Also known as word switch.

Example:

**Original Version:** Turnitin is a solution used by many educational institutions for Plagiarism detection.

**Plagiarised Version:** Turnitin is a solution used by several academic institutions for Plagiarism detection.

From the above we can observe that the structure of the sentence is the same only some key words have been changed. ‘**many’** has been replaced by ‘**several’** and ‘**educational’** by ‘**academic’**.

### Remix

It is paraphrasing from other sources and makes it fit in the work seamlessly. Paraphrasing means the act of expressing something using different words that is putting someone else ideas in your own words.

Example:

This example has been taken from the Indiana University Bloomington website.

**Original Text:**

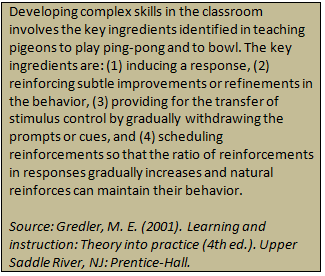


Figure 1: Original Text for paraphrasing example

**Plagiarised Version:**

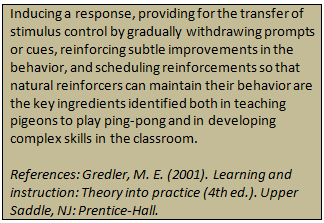


Figure 2: Plagiarised Version for paraphrasing example

We can denote that in the plagiarised version, the words of the original text have been moved around by the student. Besides in the plagiarised version there are many sentences that have been copied word-by-word. Even though in the reference section the author is cited, it is still considered as plagiarise since the author has not been credited in the paragraph in Figure 2.

**Correct Version:**

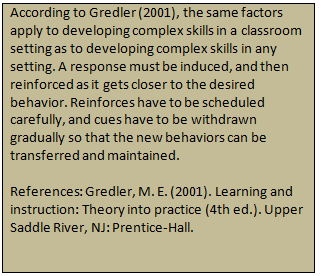


Figure 3: Correct Version for paraphrasing example

As seen in Figure 3, the idea taken from the source has been credited. The author has been cited at the beginning and in the reference section thus this is not considered as plagiarism.

### Recycle

Recycle also known as self-plagiarism is copying one’s own previous work without referencing or citation.

### Hybrid

As stated in plagiarism.org it is: “the act that combines perfectly cited sources with copied passages without citation”.

### Mashup

This is when a work contains a mixture of copied material from different sources without proper quotation or citation.

### 404 Error

404 Error includes works that have incorrect, inaccurate or non-existing attributions to source information.

### Aggregator

Proper references or citations made but works contains no original work.

### Re-tweet

Includes proper citations, references or attributions but relies too much on the original material.

The below figure shows the frequency that the above types of plagiarism occurred during the survey made my Turnitin.

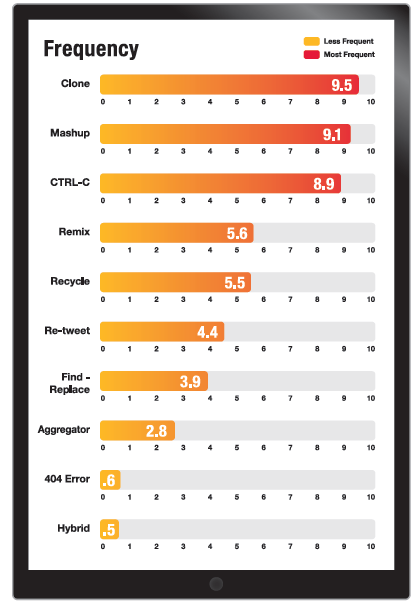


Figure 4: Frequency of types of plagiarism

### Other types of Plagiarism

### Paying someone else to do the work

Buying assignment from a party and passing it as your own is also considered as plagiarism. University of Bradford has strict measures for those students who purchased their assignment. If any student is found to have purchased their assignment they may be expelled from the University.

## Existing Tools/Algorithm for Plagiarism

There are many software or tools that are available for helping institutions around the world in detecting intellectual dishonesty. This part describes some of the popular available tools that detects plagiarism.

### Turnitin

Turnitin is a web base solution for plagiarism prevention. It is mostly used by many academics worldwide for checking students’ papers authenticity. Turnitin finds text that matches other sources in the large Turnitin databases and indicates those matches. For example if a student or lecturer submit his paper in Turnitin.com, his paper will be compared to materials available on Turnitin database. After the comparison, an originality report will be generated which indicates the matches detected and links to the original source. A percentage is also provided for the indication of non-originality in the work. It is up to the instructor and/or the institution to decide if the percentage matched is serious or not.

### Grammarly

Grammarly is an online tool available at the following url [http://www.grammarly.com](http://www.grammarly.com/). According to the website, it is trusted by 3,000,000+ People. Grammarly have the following features:

* It automatically finds and correct over 250 types of grammatical mistakes.
* It improves word selection with context-optimized vocabulary recommendations.
* The tools avoids for plagiarism by comparing texts against over 8 billion web pages. It not only discover plagiarism but it also suggest citations.

Grammarly provides 7 days trial once you register on the site. In order to have the full features of Grammarly, one will need to subscribe to it in other words this tool is not free.

*More details of the above tools and other tools will be documented in the project.*

# Methodology

Existing algorithm will be evaluated and thus a new one will be proposed. In this part different methods used by other researches will be describe and base on the analysis an algorithm will be suggested.

# Expected Output

At the end of this project, an algorithm will be proposed and documented for the detection of plagiarism in research work.

# Research plan (Time Frame)/Activity (Gantt) Chart

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tasks** | **Months** | | | | | | | |
| **January** | **February** | **March** | **April** | **May** | **June** | **July** | **August** |
| Synopsis |  |  |  |  |  |  |  |  |
| Introduction |  |  |  |  |  |  |  |  |
| Background Study |  |  |  |  |  |  |  |  |
| Literature Review |  |  |  |  |  |  |  |  |
| Analysis |  |  |  |  |  |  |  |  |
| Design |  |  |  |  |  |  |  |  |
| Implementation |  |  |  |  |  |  |  |  |
| Evaluation |  |  |  |  |  |  |  |  |
| Conclusion |  |  |  |  |  |  |  |  |

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